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BETTER FRUIT

February 1908

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BETTER FRUIT

A MONTHLY ILLUSTRATED MAGAZINE PUBLISHED IN THE INTEREST
OF UP-TO-DATE AND PROGRESSIVE FRUIT GROWING AND MARKETING

YAKIMA VALLEY'S GREAT IRRIGATION PROJECTS

BY W. E. ZUPPANN, OF NORTH YAKIMA, WASHINGTON

FOR THE reclamation of 480,000 acres of fertile land, the acreage being in the Yakima Valley, the United States reclamation service has begun construction of five immense irrigation projects which will transform sage-brush hills and plains to verdant and fruitful fields and orchards. In undertaking this gigantic task, engineering feats which would have been deemed impossible by many engineers have been undertaken and are being successfully carried through.

The Tieton canal, which will irrigate 30,000 acres directly tributary to North Yakima, has attracted hundreds of sightseers who have traveled up the Naches Valley to Naches City and then through the Tieton canyon to witness the work of the Government men who are building a main canal along the edge of a steep rocky wall, tunneling through basaltic rock or cutting channels along the very precipitous sides.

Under the Government irrigation plan for the Yakima Valley there are five different projects, as follows:

Tieton, 30,000 acres; Sunnyside, 90,000 acres; Wapato, 120,000 acres; Kittitas, 60,000 acres; Benton, 180,000 acres; total, 480,000 acres.

When the reclamation service had decided to take up the irrigation of Yakima Valley land, the purchase of the great Sunnyside canal, watering 60,000 acres, was effected. It was considered the most important canal of the valley, watering the largest acreage and controlling by its appropriation the water supply of the entire section. This canal is being extended to irrigate 10,000 additional acres, and when finally completed will irrigate 90,000 acres.

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WASHINGTON HORTICULTURAL SOCIETY MEETING
WHAT NORTHWEST FRUIT GROWERS ARE DOING

The Wapato canal is being built on the Yakima Indian reservation, and is being constructed by Indian labor. To see an Indian at work is generally considered a novelty, but to see hundreds of them digging the canal directed by Major Lynch and the federal engineers is a sight well worth witnessing. The Indians have taken an active interest in the building of the canal, for it means the irrigation of their allotment and the increase in value of their land. When this huge canal, the largest under construction in the valley and state, is completed the Yakima Indians will have increased the property value by several hundred per cent. And the Indians realize the value of land properly developed.

These two projects, with the Tieton canal near North Yakima, are the first efforts of the United States reclamation service, which will later direct its attention to the building of a high line canal in Kittitas County and to the construction of the great Benton project in Benton County.

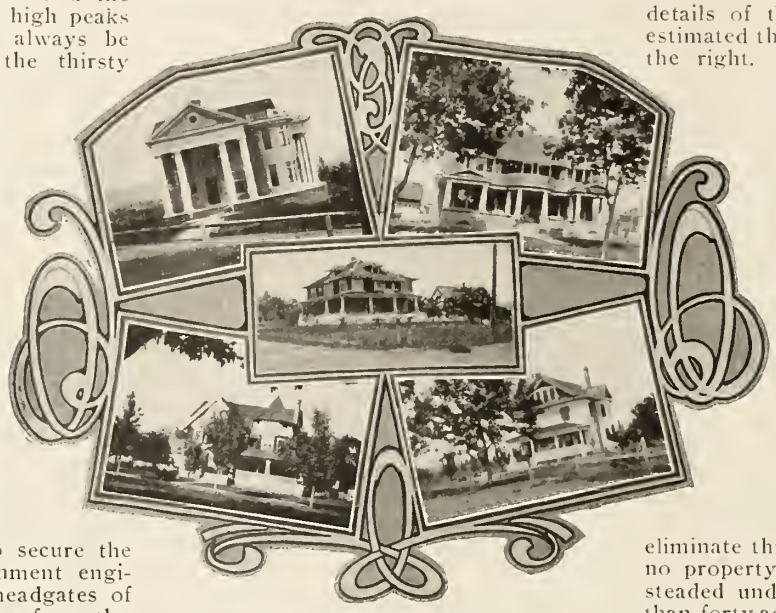
Realizing the futility of attempting to irrigate this huge acreage from the normal flow of water in the summer season, when the Yakima River and all its tributaries are low, the Government has planned for the conserving of water in various lakes high in the Cascade Mountains. Construction has been started on dams for the retention of water in Lake Cle Elum, Lake Keechelus and in McAllister Meadows, and temporary dams have been built to hold back the supply in the spring when there are freshets from the mountains. At Bumping Lake, the head of the Naches River, another immense dam will be built and roadways

WAREHOUSE OF RICHEY & GILBERT AT TOPPENISH, WASHINGTON
The structure is 270x80 feet with an acre floor space and a large basement, and is the home of the largest fruit shipping establishment in the Yakima Valley. Reputed to be the best produce warehouse on Northern Pacific line between St. Paul and Seattle. Richey & Gilbert Company's business past year was $350,000

are being constructed so that material can be hauled to this spot, far distant from all railroad facilities. Water will be held back in the winter and spring, filling up the immense lakes behind these dams, and when the supply runs low as a result of diminishing rainfall in the mountains, the reserve will be freed under direction of the engineers, supplying the full appropriation to every canal.

There is no danger of a lack of water in the Yakima Valley for all the irrigation schemes, for with the inexhaustable supply from mountain streams and the perpetual snow fields of the high peaks in the Cascades there will always be flowing water to irrigate the thirsty ground. Having arranged for the conserving of this great water supply, the Government first undertook the difficult engineering task in the building of the great Tieton canal. The 30,000 acres of land included in this project include the most fertile section of the valley, a section particularly adapted to the raising of the finest fruits and containing valuable land. A few minor irrigation schemes had already watered some of this ground and the production on such tracts has been equal to that of Nob Hill, the ideal fruit section adjacent to North Yakima. To secure the supply of water the Government engineers decided to build the headgates of the main canal about ten miles from the confluence of the Tieton and the Naches Rivers, to construct a canal with a series of immense tunnels and rock cuts along the very edge of the Tieton canyon and then to drill an immense bore through the hills about eighteen miles from North Yakima. Immense laterals, three in number, have been planned for the watering of the territory on either side of the Cowiche, and in Wide Hollow, a territory back of North Yakima and above the Congdon high line canal.

Such a plan has proven a great engineering task. It has furnished employment for hundreds of men. Until 1909 it will employ all the surplus labor in the Yakima Valley, giving employment to ever increasing throngs. Eight camps were established along the projected main canal, all located in the Tieton canyon. Camp No. 1, at which are the engineering headquarters, is located two miles up the Tieton canyon from the Naches River and is about six miles from Naches City, the terminal point of the Yakima & Valley Railroad and shipping point for all supplies. The other seven camps are scattered along the canal for eight miles, while the establishment conducted by Theodore Weisberger, the young Yakiman who had the contract to concrete the canal for the eight miles, is between Camp No. 1 and Camp No. 2, at the very head of the Tieton River. Each camp is equipped with large headquarters, stores, bunk houses, mess halls and kitchens, and resembles a military camp. The workers are supplied with the best of food and are given every possible comfort by the direction of the officials. Mail service and telephone service is afforded each camp, the Government has arranged for services of doctors and trained nurses, and in no way has it forgotten the needs of the workers. Establishment of such an enterprise and the continuance of the work for a period of three years necessitates the expenditure of a large sum of money, and the Government estimates are that over $1,500,000 will be spent on the building of the Tieton canal. This money must be returned to the reclamation service for the building of other reclamation projects, and for this purpose the owners of the lands under the canal are to be taxed for the water rights.



RANCH HOUSES, YAKIMA VALLEY

The Tieton Water Users' Association, which co-operates with the Government, has been formed and is arranging the details of the water right sales. It is estimated that it will cost $60 an acre for the right. Uncle Sam is not a hard dealer, and with his usual generosity, he has offered to give "time" on the water right cost. The purchasers will be required to meet the cost in ten equal annual instalments. This gives a perpetual right to water from the canal. Similar associations will be formed for the other canals and will work in a similar way.

Not only has Uncle Sam thus carefully looked after the interests of the land owner, but he has decided that there shall be no monopoly or speculation of this property, vastly increased in value by the construction of the canal. To eliminate this, a rule has been made that no property owner who had not homesteaded under the canal can hold more than forty acres of ground, while a homesteader must release eighty of his 160 acres to secure the water rights. The surplus land will be placed on the market by the Water Users' Association if not disposed of by the time the canal is finished. This rule has caused a lively business, property is being subdivided and sold to hundreds of people all over the United States.

Should each person hold the maximum of forty acres, there will be 750 families supported by the Tieton canal lands, an additional population for the section of 3000 persons. And the rule will mean

SCENES IN ORCHARD OF E. L. STEWART, NEAR PROSSER, WASHINGTON

PACKING YAKIMA APPLES

the addition of 12,000 families to the rapidly growing Yakima Valley, when applied to all other projects. While three years from the completion of the canal, it is estimated that $9,000,000 worth of produce will be the yield of the land, the increase of shipments taxing the facilities of the railroads now operating into Yakima Valley or building through it, and contributing substantially to the support and growth of North Yakima, Naches City and the smaller towns that are certain to develop within the borders of the project.

It is expected that the produce developed on these lands will find a ready market in the thickly settled Eastern States, as the produce of the valley now does, and the returns of money will more than equalize for the purchase of other material needed by Washington from Eastern sections. The entire list of projects covers sixteen times as much as the Tieton and were the estimate to be cut to two-thirds, the yield would be the mammoth sum of $96,000,000 worth of produce. More generous estimates fix the yield at $144,000,000.

Secretary Garfield, of President Roosevelt's cabinet, was a visitor in the Yakima Valley this summer. He visited the Tieton, Sunnyside and Wapato projects, and the Yakima Valley residents have his assurance of further backing from "headquarters" for the reclamation of the lands. Secretary Taft, who made a flying trip through Washington and stopped long enough in North Yakima, Wapato and Toppenish to say "Hello" to hundreds of people, practically made the same promise. High officials of the Government, seeing the development of the Yakima Valley, believe that further development means much for the future not only of the valley, but of Washington, of the Northwest and of the entire United States.

But this support would not have been secured and this vast work would not have been undertaken had it not been for the approval and the urging of the Washington delegation in the two branches of the United States Legislature at Washington, D. C. Congressman Jones was especially active in his backing of the projects, and to him much of the credit is ascribed by Yakima Valley residents. But he was not alone in the approval, for every Washington Representative and Senator aided.

Between the headgate of the Tieton canal and the beginning of the laterals there are a half dozen tunnels. Some are of immense size. To clear the way through these bores has proven the most difficult task, the job being even more difficult than the cutting of the passage along the stone cliffs. It was to furnish means for this boring of tunnels that the engineers utilized the power of the Tieton River for electric plants, one of which was constructed by the Government at Camp No. 1, and another by Theodore Weisberger at a point near his camp at the headwaters. The fall of the Tieton River is rapid and the power canals, while short, give an immense fall and power. With power furnished from these plants the electric drills and other machinery that is used in boring through the basaltic rock is driven, experienced men being employed for this work. Great channels, similar to those of mines, are being cut and blasted out. But although this work is being hurried it will be another year before this can be finished.

With the building of the Tieton canal has come the development of one of the most thriving small towns of the Yakima Valley, Naches City. This new town, which was built in a year, is at the terminus of the Yakima & Valley Railroad, and is the shipping point for all the machinery, equipment and stores of the United States reclamation service quarters on the Tieton. It is also the nearest railroad point to much of the Tieton land, and when the canal is finished will draw its quota of business from the ranchers on the project.

Immense warehouses for the reclamation service, for Contractor Weisberger and lumber companies that are supplying material for the canal have been built in the little town, which has an excellent business district. Much of the irrigated section of the country surrounding Naches City has more rapidly developed since the building of this town, and the upper Naches Valley has become one of the best known parts of Yakima County. Nothing is more interesting in Yakima County than the comparison of the great Nob Hill fruit lands and the desert sage-brush land which will be irrigated by the Tieton canal. The experiment of the ranchers has shown that the Tieton "dry lands," as this sectilon is generally termed, are as fine fruit land as the Nob Hill district. Now the section is covered with a heavy growth of sage-brush, and is the abode of coyotes and jack rabbits. Some few intrepid men have built their homes in the Cowiche basin, where there is some water supply for irrigation, and have arranged for pumping of water from the highest canal onto land adjoining this irrigation projeet. But few and far between are the homes on the Tieton dry lands. Within a half dozen years it will be a section populated by hundreds, with pretty homes, bearing orchards, and with good schools and churches. The owners of the land, where the property has already been subdivided, are nearly all Eastern people or present residents of North Yakima, who propose to develop the

YAKIMA
STRAWBERRIES, CHERRIES AND APPLES

A YAKIMA PEACH TREE

PROLIFIC YIELD OF PEARS
Tree in Foreground is Only One of Many Others Similarly Loaded With Fruit in An Orchard Near Granger, Washington

land and live upon it." Already the Yakima Valley Transportation Company has planned for two electric lines which will extend over the Tieton district, one going out through Wide Hollow and making an extensive loop far out on what is now sage-brush land. The other goes across Nob Hill, on the Summit View road, and will bring much of the district into close touch with the city. These lines will not only afford easy means for development, but when the orchards begin to produce will furnish ample and quick transportation facilities to the markets of North Yakima.

Other transportation will be afforded by the Northern Pacific Railroad, which is only two or three miles distant at North Yakima, by the Yakima & Valley Railroad, which extends for eighteen miles along the edge of the Tieton district, and by the new North Coast Railroad, which is surveyed to go through the Naches Valley and up the Tieton canyon, giving railroad facilities on two sides of the district. Such facilities, which are certain, and the plan of the Chicago, Milwaukee & St. Paul Railroad to extend a branch line into North Yakima from the Columbia River, portend much for this new section.

The fact that the Federal Government owns one-tenth of the land under the Tieton canal and that the state of Washington owns another tenth, is known to few persons. When the Government decided to irrigate the land under the five Yakima Valley projects, all the property was withdrawn from entry. Under the Tieton there remained 3000 acres that had not been taken by the state or by homesteaders.

This large tract of land will be open to settlement when the canal is finished, although the Government officials have not announced in what way it will be placed on the market. It is generally presumed that the arrangement will be for a drawing, the successful ones to pay a nominal sum for the land, as well as to pay for the water right. The state lands will be sold at auction.

Land in the Yakima Indian reservation will not be opened to entry for several years, although the Indians can sell a portion of their allotments under a law that is about to go into effect. This law allows the Indians to sell sixty acres of their allotment of eighty, the money to be used to irrigate the remaining portion. Through other laws Congress has placed some small tracts in the reservation on the market.

A BIT OF CANAL LANDSCAPE, YAKIMA VALLEY, WASHINGTON

THE MAN who knows is the man who reads and investigates for himself. No single orchardist knows it all, and if he does not avail himself of the experience of others he won't get better prices. Subscribe to "Better Fruit" and learn what others know; it will help you get better results.

SCHOOL HOUSE, SUNNYSIDE, YAKIMA VALLEY, WASHINGTON

ORCHARD DEVELOPMENT IN THE YAKIMA VALLEY

EVER increasing acreage of bearing orchards in the Yakima Valley in Washington is resulting in enormous shipments of fruit, which are estimated to total for 1907 over $1,000,000. Of this amount fully $450,000 has been produced in the territory directly tributary to North Yakima and shipping through that station, while immense shipments have been made from Wapato, Toppenish, Sunnyside, Granger, Prosser, Kennewick and other points.

AN EXAMPLE OF THE FINE PEACHES GROWN IN THE YAKIMA VALLEY

Apples have kept the lead for the year as in all previous seasons, the total shipments of that crop from North Yakima alone amounting to over $200,000 this season. Peaches have been second in the yield, and pears have taken third place. Through the entire valley, and especially in the lower valley near the Columbia River, the strawberry crop for 1907 was extremely profitable, while bush berries, grapes of both California and other varieties, apricots, plums and prunes were included in the tonnage. Express shipments from North Yakima during 1907 were larger than in any other previous year, totaling nearly two million pounds. This tonnage was distributed over seven shipping months, with the heaviest showing in September, when over a half million pounds of express were sent through the local office. The following is the statement of the Northern Express Company for the North Yakima fruit business during this period:

Month	Packages	Weight
May	1,047	27,968
June	10,783	247,000
July	11,067	248,300
August	14,811	397,266
September	34,408	537,462
October	21,334	238,414
November	900	11,000

While these figures have not been duplicated by any other express station in the Yakima Valley, they form a basis for estimates of the fruit crop in other sections of this district. Express shipments from Kennewick and other lower valley points were especially heavy during the season.

Such tonnage results are an indication of the enormous yields of the individual orchards of the valley, and especially of the sections shipping through the metropolis of the valley. Nearly all of the fruit produced in the Nob Hill, Fruitvale, Moxee, School Section and Wide Hollow districts, from the Naches, Selah and Wenas Valleys, is sent from this point. And from the orchards in all of these sections there have been returns that are almost incredibly large, excepting to the experienced horticulturist, the grower of the fruit, or to the buyers of the Washington product, who have come to know the section as a regular and large yielder. Instances of the heavier yields of the orchards are numerous, and announcement after announcement comes from the orchardists as to the immensity of their crops and the good prices secured for the fruit.

W. I. Huxtable & Sons, with a ranch on the crest of Nob Hill, sold $11,700 worth of peaches from eight acres of three and four-year-old Elberta and Salway trees. Osborne Russell & Sons had two and three-fourths acres in Elberta peaches and picked 4000 boxes, selling them at 75 cents a box. The net income from this small tract was about $2500. The same ranchers had one and three-fourths acres in Spitzenberg apples from which they secured $4000 worth of apples. These two tracts, adjoining

COLD STORAGE PLANT OF HUGHES & DEKAY AT NORTH YAKIMA, WASHINGTON
At the time the picture was taken there were on storage in this plant forty cars of apples

each other, are in Fruitvale. J. H. Forman, whose three-quarter-acre orchard of Buerre de Anjou trees has been almost famous because of its yield this year, picked two carloads of pears from fifty-four trees, selling them in New York City, netting over $3000. W. F. F. Selleck has an orchard of 269 peach trees on Nob Hill, trees were three years old in May, and secured 3075 boxes that sold for 75 cents a box, securing $2306.25 for this crop. Granville Lowther's ten Elberta trees produced 430 boxes. These were sold at 75 cents a box. L. B. Barbee reports that his six-year-old Winesap orchard near Zillah produced $960 worth of fruit to the acre. On the J. A. Shadbolt ranch in Parker Bottom over $25,000 worth of peaches, pears and other fruit was produced, the entire tract including alfalfa, being about forty-two acres. John Gray's Winesap orchard in Fruitvale had a yield of about $2000 to the acre on Winesaps this year. From the ranch owned by Mrs. W. L. Wright, in the Naches Valley, 5500 boxes of apples were picked this fall, the orchard covering eight acres. The fruit was of an exceptionally high class and brought more than the average market price. Four years ago Theodore S. Darby purchased a ranch near North Yakima, paying $4200 for the property. In 1907 he sold $4206.70 worth of fruit from this property, ten acres in all. R. G. Linse has an orchard of one-half acre, in three and four-year-old peach trees, the small tract producing $600 worth of fruit this year. Peter Bach of Fruitvale picked 2224 boxes of peaches this year from a tract of one and two-thirds acres of four-year-old trees. The peaches brought 82½ cents a box, or $1835. W. L. Thompson of Parker Bottom sold 743 boxes of Jonathan apples from 450 trees, five years old. They brought $2.25 a box, or $1671.75 for the crop. A notable instance of the value of Yakima Valley land as orchard property is shown in the orchard of E. L. Stewart, near Prosser. During the years 1904, 1905 and 1906 this orchard produced $9150 net from six acres, or $1525 net per acre. He had a good crop in 1907. C. H. Rhoades sold peaches at $6.50 a tree, netting $1040 an acre. His net profit on pears this year was $1300 to the acre, grapes brought $700 to the acre, and cherries brought $15 to the tree. Prompted by these large yields and returns, and confident that there will ever be an excellent market for the Yakima fruit, ranchers are enlarging their orchards and are bringing new tracts into cultivation. The heaviest percentage of trees not in bearing is apples, and during 1907 there have been hundreds of acres planted to the various varieties of these trees. Peaches rank second in number and will probably maintain that position, as the Yakima peaches find ready sale in Eastern as well as Western markets. While the increased acreage has been considerable as a result of this planting, it will be even more rapidly enlarged when the United States reclamation service completes the great Tieton canal which will water 30,000 acres near North Yakima and Naches City. Most of this land is adapted to fruit culture. It is situated on high land, well drained and easy to irrigate from the laterals planned by the Government.

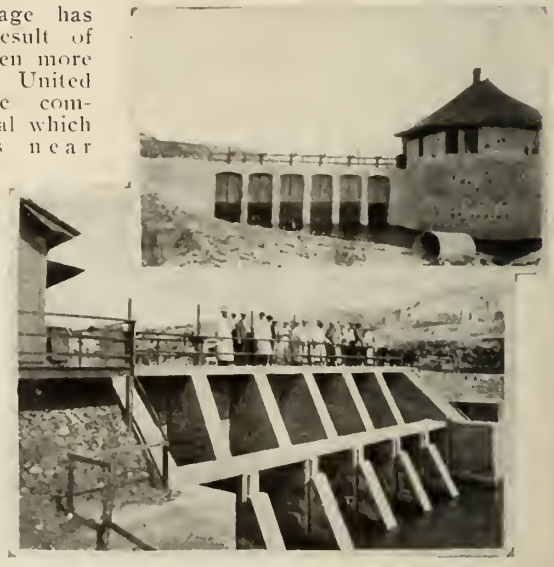
SUNNYSIDE CANAL HEADGATE, YAKIMA VALLEY

The Government is expending $1,500,000 in the building of this great canal, which will be completed early in 1909. Eight miles of main canal are being dug and tunneled along the Tieton River, and almost the entire flow of that stream will be diverted onto the dry lands through this system. Such feats of engineering as have been necessary to bring this water to the land have never been previously undertaken in the State of Washington. Hundreds of workmen, living in eight Government camps along the Tieton canyon, have been working for months in starting this task. They have dug great trenches, have built heavy fills, have started great bores through the rock, the largest of which cuts through the basaltic rock several miles from the confluence of the Tieton and Naches Rivers, where the water will be taken through the hills to the fertile hills and valleys along the Cowiche Creek, the Naches River and the dry lands back of North Yakima and Nob Hill. Much of the soil in this section is a duplicate of that of Nob Hill, and much of it is of the same producing possibilities. Some of the well known ranchers have already taken tracts of this ground, planted it to trees and are watering them by means of a pumping plant installed by Theodore Weisberger, the young contractor of North Yakima.

While the increased fruit acreage in the neighborhood of North Yakima will be materially increased through this canal's construction, private companies are making extensions of other canals into good fruit districts, and the Government is not neglecting other sections. In the Parker Bottom district, the Union Gap Irrigation Company canal is being extended, bringing under cultivation many acres of valuable property. The Sunnyside canal, now owned by the Government, is being extended and will water 10,000 more acres. On the Yakima Indian reservation the Government is aiding the Indians in building a canal that will eventually water 120,000 acres, much of which is considered fruit land. The Selah Development Company is extending its ditch and will bring hundreds of acres into cultivation in that valley. Private companies are assisting by irrigation in changing the aspect of the Wenas and the Naches Valleys.

The Main Irrigation Canal Just After Water Has Been Taken From the Yakima River

The Canal and Intake House From Below Granger Basin



IRRIGATION SCENES AT GRANGER BASIN, WASHINGTON

Upper view shows intake house; lower view shows solid cement construction of the intake

Near Kennewick, Kiona and Prosser there are changes in the appearance of the country through the constant extension of canals. The building of irrigation canals along the Columbia River, between Priest Rapids and Kennewick, means the reclamation of more land in Yakima and Benton Counties in a section particularly adapted to the growing of peaches, apricots, grapes and berries. Notable among these new canals is that of the Hanford Land and Irrigation Company. No accurate figures can be given as to the number of acres that are being reclaimed through these new irrigation projects, nor the number of acres that will be planted to fruit by the owners of this property. It is almost certain that one-half of the acreage, however, will be placed in trees in less than five years. This means immense increase in the shipments.

Marketing of this produce will be a question for the Yakima producers in the near future, but relief is already in sight, for new railroads are building into the country and will take care of much of the shipping. The Portland & Seattle Railroad will not only take off a certain load from the main line of the Northern Pacific Railroad, but also will handle some of the lower valley produce. The Chicago, Milwaukee & St. Paul Railroad will take care of heavy shipments in the neighborhood of Ellensburg, and is expected to build a branch into North Yakima. The North Coast railroad line, now being built, cuts through the valley from the Columbia River to the Cascades, and affords more relief. Before any difficulties in the way of shortage of shipping facilities are noticed these roads will be operating and benefit the country in that direction.

Local transportation, which has previously been by means of wagons and other vehicles, will in the future be in electric cars, for the Yakima Valley Transportation Company lines are being built into the farming district, with a view of hauling the boxed fruit and other produce to the city for shipment. Over 250 miles of this suburban railroad, all tributary to North Yakima, are to be built. Hundreds of carloads of fruit will be brought to North Yakima for shipment over the steam railroads by this electric line. It will afford a safe and cheap method of transportation with little loss of fruit by handling of the boxes.

While anticipating much future development in increased acreage, the Yakima Valley fruit growers are not neglecting the present opportunities for bettering the fruit shipments. More care is being taken with the preparation of the packages for the market, the apples are being more carefully sorted and more evenly packed. The boxes are being made more attractive, both as to the goods and as to the exterior. In fact, a Yakima brand on a box of apples or peaches or pears can now be taken as a guarantee of the fruit's excellence.

There has been considerable discussion among the ranchers as to the advisability of starting a regular school for packers, and it is not improbable that Yakima men and women will be given an opportunity to thus learn the best systems of packing. Upbuilding of the fruit industry in every way and including every crop that can be grown in the Yakima Valley is the desire and the purpose of every fruit grower now in the section. This united spirit means much for the future welfare of the Yakima country, and will bring results that could not be attained by hundreds of men, however willing, if they were not united in their purpose.

APPLE TREE WITH ITS LOAD OF FRUIT NEAR NORTH YAKIMA, WASHINGTON

Almost the whole world knows of Hood River as a place that produces the best fruits, and all of Hood River Valley should know, and could know, that there is one place in Hood River, under the firm name of R. B. Bragg & Co., that the people can depend on getting the most reliable dry goods, clothing, shoes and groceries at the most reasonable prices that are possible; try it.

HOW FRUIT IS PACKED IN THE YAKIMA VALLEY

THE FOLLOWING are the instructions relating to the picking and packing of various kinds of fruits issued by the Yakima Horticultural Union:

Apples

As apples are the most important fruit grown in Yakima County it is therefore of great importance that we try to reach perfection in the grading and packing of this fruit. The following is the method of packing export apples and this method should be followed as closely as possible in all packing.

ELBERTA PEACHES, YAKIMA VALLEY

In picking great care must be taken not to bruise the fruit. Do not grasp with the fingers, but rather in palm of hand. A light wooden basket lined with cloth makes one of the most desirable picking baskets. In emptying the fruit should not be poured out, but placed on the table by hand. Next the fruit should be carefully sorted, all infected fruit must be thrown aside. But two grades can be packed, first and second. First class fruit shall consist of fruit that is well colored and free from all blemishes of any kind. No. 2 fruit shall consist of fruit blemished by limb rubbing, also peculiarly shaped fruit, or that which is off color, but positively no infected fruit. The fruit must then be graded as to size so that two different sizes will not appear in the same box. Sizes in exports run as follows: 64, 72, 80, 84, 88, 96, 104, 112, and sometimes 128, the latter only for Yellow Newtowns.

The two two pack, as it is called, includes all sizes from 72 to 104, and is packed as follows: Place an apple in one corner and another midway between this one and the other corner. Then put an apple in each of the two spaces left and if the apple is large enough for a two two pack it will only go half way down. This will leave two more spaces, and so on. The next tier is started by filling the two spaces left in the lower tier. Reverse each time and so on throughout the box. Apples must be graded carefully to have the pack neat. The 64 pack and larger is called a 3½ pack and is packed by placing three apples side by side, leaving a space between the last apple and the side of the box. Then start the next row in the space, leaving a space on the other side of the box and so on throughout the box. Four tier, which includes the 112 and 128 pack in Yellow Newtowns, and the 96 and 112 in Spitzenberg, is a solid pack four wide and four deep, one apple directly on top of another. All export apples and fancy varieties must be wrapped in paper. These include Yellow Newtown, Spitzenberg, Jonathan, Rome Beauty, Grimes Golden, White Winter, etc. The four and one-half pack is a two three pack which is explained in the pear pack. Apples as small as 150 are sometimes used as export fruit. Therefore as much care should be taken with the smaller fruit as the larger. Great care should be taken by the grower to provide himself with tier and variety stamps, and in case of export fruit the number stamp showing the number of apples in a box. Fancy labels will be used on pears and apples put up for Eastern and export trade, and growers must use care in marking the boxes. If a private stamp is used put it on the opposite end of the box. Unless instructions are carefully followed with fancy fruit, it cannot be shipped East, as our labels are a guarantee that the fruit is as represented. It is very important that the growers provide themselves with tier and variety

THE WAY CHERRIES GROW IN YAKIMA VALLEY

A ROSE CORNER IN AN ORCHARD ADJACENT TO SUNNYSIDE

stamps for all kinds of fruit and use them according to instructions; this avoids delay and unnecessary work at warehouse when fruit is offered for shipment.

Pears

Pears should be 2¼ or 2½ inches in diameter before they are picked, and after picking should be carefully sorted before packing, all inferior fruit being thrown aside before any is put on the packing table. In starting pack, carefully wrap each pear so that wrapper will not unfold and expose the fruit to the air. The first row should be placed with the blossom end to the head of the box, the rest of the tier the other way. When pears are picked right they will pack a three two, i. e., place a pear in each corner and one in the center between the two, leaving two spaces. Then place a pear in each space, and so on through the tier. The next tier is packed the same, with one exception. Instead of starting with three pears, start with two, placing them in the spaces between the pears in the lower tier; reverse each time, making five tiers in the box. A full pack is from fifty to fifty-two pounds. Height and weight may be increased or decreased by means of placing the fruit. If the pack is too light, place fruit on slant and keep it tight; if too heavy, lay the fruit flat. The fruit in the first layer should be placed with the smooth side of the wrapper down, the remaining tiers with the smooth side up. One thing must be carefully observed, never pack pears otherwise than a broken pack. The tier should be stamped on the box the same as apples. If large pears are separated and packed 4-tier, 4-tier stamp should be used.

SECTION OF U. G. I. COMPANY'S CANAL, YAKIMA VALLEY, WASHINGTON

Peaches

In picking peaches the fruit should not be grasped with the fingers, but rather in the palm of the hand. The fruit should then be lifted slightly, which will break the stem. There should be several pickings of peaches, picking the ripest each time. Before packing the fruit should be carefully graded as to ripeness, and the firm and ripe fruit packed in separate boxes. Peaches should never be packed one directly on top of the other, but in broken rows; fruit packed otherwise bruises too easily. In wrapping the peaches packer must be very careful to put the paper on so as to make a cushion, which must be placed down or on the bottom of the box; never place cushions both ways. Peaches running more than 108 to the box should not be packed, as they are not marketable. Mark number of peaches in box in upper left corner, also stamp variety in right corner. Mark boxes of ripe fruit with x in right corner of box under variety stamp.

A FINE YIELD OF NEWTOWN PIPPINS
Picture taken in orchard near Granger, Washington

Prunes

Prunes, like apricots, should be picked carefully and not shaken from the tree. Care should also be taken to prevent the bloom from being rubbed off, as it aids the keeping and improves the appearance. Prunes must be packed on end to bring the pack high enough. In the lower course prunes smaller than 5x5 should not be used, but in the second and the third courses prunes as small as 6x6 may be used. The top course must be creased. Paper must be used between each course and over the top, and great care must be taken to have the

PICKING CHERRIES IN A SUNNYSIDE, WASHINGTON, ORCHARD

pack smooth and firm. The weight of each crate should not be less than twenty-eight pounds. Plums, such as Peach and Bradshaw, should be packed the same as prunes.

Apricots

Apricots should be picked carefully and not shaken from the tree, either on to a canvas or otherwise. The regular package for this fruit is the prune crate. Four-inch peach boxes are sometimes used, but are very unsatisfactory, unless so ordered. The apricot must be packed

YAKIMA VALLEY RASPBERRIES

with great care, so as to have them placed firmly in the package but not too tightly. There must be three layers in each basket with paper between each layer. The top layer must be creased, i. e., the creases in the fruit must lie in the same direction. Either straight or broken pack may be used. The fruit must not come too high above the top of the basket; this can often be prevented by placing the lower rows on the flat side, however, never pack the top layer in this manner. Place the paper in the basket in such a manner that it will protect the fruit in the crack of the package. Stamp the variety in the upper right hand corner of the box.

Cherries

Cherries should be picked very carefully by catching the stem close to the limb, then lift slightly so as not to injure the tree. In some varieties of cherries there are small leaves attached to the stem; these should all be removed before packing. Before starting to pack, the cherries for the face of the box should be carefully sorted as to color and size; then place them neatly, one at a time (not in handfuls) in the box, the creased side down so as to show the facing on top when the box is opened. Fruit should be placed in box so it will be in rows both ways, unless a broken pack is used, which may be done in the case of very large fruit, when the appearance is improved. The broken pack is done by placing cherries alternately one in the space between two, and so on through the whole face. The packer should be very careful in grading and placing fruit so the rows will be perfectly straight. Filling is thought by some to be of no great importance, but this is a mistake. The fruit should be placed in carefully in small handfuls in order to prevent the face from falling, and corners of the box should be well filled. In finishing the pack have the box well filled, slightly above the top and a little rounded. This will keep the face firm and the box can then be hauled or handled in any manner without any danger of spoiling the appearance of the face. Royal Anns, Bings, Black Tartar-

YAKIMA VALLEY GRAPES

ians, Black Republicans and other large sweet varieties should be packed in ten-pound boxes. May Duke, Late Duke and other sour varieties in berry crates, unless otherwise ordered. Stamp the variety in the upper right hand corner.

BARN AND ORCHARD OF J. F. CRITTENDEN, NEAR ZILLAH, WASHINGTON

A SHORT TREATISE ON THE PLANTING OF TREES

BY E. H. SHEPARD

WHILE some prefer setting trees in the fall, the majority usually set in the spring. Either time is all right, providing the soil is in the proper condition. The holes are dug wide and deep, and when the tree is set it is well "firmed" in the ground. The soil should be sufficiently dry to pulverize nicely. Two methods of laying out an orchard are in vogue, the hexagonal and the square. The hexagonal enables the orchardist to plant more trees to the acre. Either system is good. Apple trees are usually planted twenty-six, twenty-eight and thirty feet apart. In no case should they be less than twenty-six feet, and on the other hand in Hood River Valley it is not necessary to set them over thirty feet apart.

JONATHAN APPLE TREE IN BEARING NEAR GRANGER, WASHINGTON

As the beginning of an orchard is of vital importance, it is wise even in a short article like this to say a few more words about preparing the ground and about digging the hole. The ground should be plowed deep and thoroughly pulverized by harrowing and dragging until it is in the best possible tilth. The holes should not be less than twenty to twenty-four inches deep and should be at least two and one-half to three feet across. In digging the hole it is best to throw the top layer of dirt to one side and the bottom layer on the opposite side.

When the hole is refilled it is advisable, as far as practical, to fill the hole up with the soil from the top layer. And it is important in filling to see that no dead roots, left from the clearing, get into the hole, for the reason that the dead roots of other trees in some way which I cannot explain poison the root of the apple tree and are apt to kill it.

The roots of the young tree should be cut off diagonally, so that the flat cut will rest squarely in the hole, and the cut should be so made and the tree so set that the cut part will be on a level with the bottom of the hole. It is well to have the roots of the tree well moistened before planting. This can be done by placing the young trees in a barrel of water. The tree should be cut off about twenty inches from the ground if you want low-headed trees, and that is what the orchardists want nowadays. The trees should be properly pruned so as to develop a low-headed tree, and a tree at the same time whose branches will be spreading, so that the sunshine can get into the center of it. It is necessary to color your fruit and devolop it to the highest state of perfection.

SOME ONE-YEAR-OLD YAKIMA VALLEY PRODUCTS

There are two methods of pruning; one being that of pruning the tree to a central leader, and the other the vase system. Both have strong adherents. Either is good when properly done. The pruning and shaping of a tree is perhaps one of the most important features in the growing of an orchard, and at the same time it is the most difficult to explain. I doubt very much if anybody could write an article that would teach a man how to prune prop-

HOME OF JUDGE JOSEPH LANNIN, IN SUNNYSIDE—THREE YEARS FROM SAGE BRUSH

erly. It is a business that he must learn by practical experience and observation. So I will pass that subject by and take up a few of the other important subjects of orchard management that are of general interest.

In order to get the best results, both as to yield and size of fruit, it is necessary to keep the orchard under perfect cultivation, so that the soil will be properly pulverized. A thorough state of cultivation is necessary in order to enable the rootlets to get their food from the soil and it is also necessary in order to conserve the moisture, which is absolutely necessary for the growth of the tree. Moisture can be supplied by irrigation, but while Hood River Valley is blessed with three irrigation systems and therefore has an ample supply of water, very little water is brought into our orchards. Most of the growers will not water an orchard until the trees come into bearing. We claim the roots go deeper if not irrigated, and therefore get a bigger area of soil.

After an orchard comes into bearing, even then many fruit growers do not irrigate, and few irrigate more than once a year. We believe that the less water an apple has the better the flavor will be, and we feel equally convinced that the apple that is not irrigated, or only is irrigated once during the season, will keep longer than the one irrigated more frequently.

I will not go into the details of spraying further than to say that growers in Hood River Valley put on a fall spray, using Bordeaux mixture, where there is no indication of anthracnose, and also lime and sulphur, both to eradicate and prevent the development of San Jose scale or fungus. In the spring the lime and sulphur solution is again used for the same purpose. When the apple trees are in blossom, just before all the petals have fallen, growers put on their first spray for the codling moth. They use arsenate of lead, and put on three to five sprayings with this material during the season.

When the apples are the size of hazel nuts, or just before, the first thinning is given, every cluster of apples is thinned so that but one remains. The second thinning usually is done a little bit later after the first drop occurs, which is when the apples are the size of hazel nuts. At this time they are so thinned that no branch will have more than it can support without breaking. The usual distance is from four to eight inches apart, according to the load on the limb and the variety of apples. By thinning to this distance Hood River produces the finest quality of fruit in size and appearance, and when it is done with good judgment, a uniform size is obtained throughout the entire orchard and the sizes are grown that command the highest prices. When the apples are picked they are handled very carefully to prevent bruising. When they are packed the same care is used in handling them. Any sting, blemish, bruise or deformity that affects the general appearance of the apple is considered sufficient cause for throwing it into the cull box. The apples are packed by experienced packers. The box is lined with white paper. Paper is placed between each layer, and duplex paper is wrapped around each apple. The box is then attractively labeled.

SCENE SHOWING WONDERFUL PRproductivity OF THE SUNNYSIDE, WASHINGTON, DISTRICT

MUCH has been said recently as to what is being done by the government on the Isthmus of Panama in the construction of the canal, and in an article which appeared a short while ago in the Literary Digest under the caption, "Outdoing Expectations at Panama," the writer referred, with a good deal of proper pride, to the fact that 1,868,729 cubic yards of material had been moved during the month of October. This was, without doubt, a credit to American engineering ability and methods, and while the writer of the article looked upon it as representing a stupendous task and an unusual amount of excavation, it is not so if one stops to measure the feat by similar feats performed on some American railways in these days of grade revision and general reconstruction.

The reader need not go far from home to learn that during exactly the same period the Northern Pacific Railway moved 3,432,928 cubic yards of material — almost double that moved by the Panama canal engineers—in new work now under way on that great system.

While this work was going on the usual heavy freight and passenger traffic was moved without any serious inconvenience from this cause. The figures afford an extremely interesting comparison and show at a single glance the tremendous volume of work being done by the Northern Pacific in improving its facilities to meet the new conditions. This work is not confined to any one state, but includes the entire Northern Pacific country in the states of Wisconsin, Minnesota, North Dakota, Montana, Idaho, Washington and Oregon — from the Great Lakes to Puget Sound and the Pacific Ocean —and includes double tracking, reconstruction of single track to conform to new and easier grades and curvatures, replacing old bridges with new and more substantial ones of steel and concrete, enlarging yards, new terminal facilities, etc. Another item of interest is the fact that the Northern Pacific Railway is carrying as heavy tonnage on a single track main line as many of the Eastern railways on double tracks.—Minneapolis Tribune, December 8, 1907.

INSTRUCTIONS TO PACKERS IN YAKIMA VALLEY

PACKERS, before starting work, will go to the office and leave their names. Each packer will be given a number, and a rubber stamp with which to stamp each box of fruit packed, in the space indicated by the foreman. This stamp becomes an identification mark showing who packed the fruit. In case a box be inspected at any time and found not up to the standard as to the grade of fruit and proper pack, a re-pack will be required without additional pay. Any tendency to slight the work will merit discharge. Packers will inform themselves as to the requirements in regard to grade and pack, the foreman giving all instructions necessary. Strict attention will be given the work during business hours and no one will be permitted to disturb or interfere with the packers while at work. Bear this in mind, as it will be to our mutual interest.

MEETING OF OREGON HORTICULTURAL SOCIETY

THE meeting of the Oregon State Horticultural Society, held in Portland January 14, 15 and 16, was one of the most successful ever held in the state, both as to the sessions of the society and also from the point of view of the apple exhibit. Delegates were in attendance from all parts of the state, and many valuable papers were read and addresses made. The meeting is expected to result in much good to the horticultural interests of the state, and brought out the fact that growers in Oregon are more united in their efforts for better fruit-growing conditions than ever before. Several important resolutions were adopted, among which was one to create a committee, to be named by the president, to confer with the State Board of Agriculture at Salem for the purpose of revising the premium list on horticulture. The Oregonian in its excellent account of the meeting says:

Papers and Addresses

Among the most interesting papers presented was that by State Engineer J. H. Lewis, of Salem, who discussed "The Fruit Grower's Interest in the Conservation and Distribution of Water." He urged the necessity of legislation for regulating the appropriation of water and at the same time protecting vested rights. In support of the value of an unfailing water supply for horticultural purposes, the speaker cited an instance in the vicinity of Walla Walla, where from 200 acres of irrigated land $500,000 worth of fruit had been gathered. Irrigation projects for the reclamation of 394,000 acres of arid land in the State of Oregon, announced the speaker, are under way either through Federal, state or private enterprise, a development that means much to the state.

"Reminiscences" was the subject assigned Dr. J. R. Cardwell, ex-president of the Horticultural Society. It was an interesting paper, in which the veteran horticulturist reviewed the history of fruit growing in this state from 1852, when Oregon practically supplied California with pest-free apples, until the present time. He gave a brief history of the introduction of different fruit plants into this state, together with the appearance of various pests and the success that has attended the efforts of the State Board of Horticulture in a campaign of education to eradicate these unwelcome intruders from the orchards.

A. M. Aspinwall, of Brooks, championed the "Loganberry and Its Culture." While this fruit is a hybrid, the product of a cross between the blackberry and the raspberry, originated by Dr. Logan, of Santa Cruz, California, Mr. Aspinwall spoke highly of its great productiveness and the wonderful adaptability of the Willamette Valley to its cultivation.

Joseph Hall, of Newberg, created something of a surprise among the fruit growers when he recommended drying black raspberries on trays in the sun. He called attention to the success with which farmers in the vicinity of Newberg have been raising this fruit, which he said was one of the heaviest producers and most profitable grown in the state. During last season, he said, ten tons of this fruit had been evaporated and marketed at Springbrook, a small station in Yamhill County, and for which the producers received $450 a ton aboard cars at the shipping point.

A. Vercler, of Salem, gave an interesting paper on "Spraying," in which he argued that the growing of fruit for commercial purposes in this state can only be accomplished by the use of power sprayers. He recommended the use of compressed air.

BIG SIPHON
Irrigation System Cowychee Gap, Yakima Valley, Washington

Tom Richardson, manager of the Portland Commercial Club, gave a complimentary talk, and at his suggestion the society adopted a resolution extending an invitation to all the commercial organizations of the city and the public school children, as well as all progressive citizens, to visit the exceptional exhibition of fruit at the Woodmen Hall.

A. C. Newell, of Gresham, read a paper on "The Standard for a Nurseryman Salesman."

Reports were read from H. C. Atwell, of Forest Grove, and E. R. Lake, of Corvallis, president and secretary, respectively, of the association. Both reports congratulated the fruit growers of the state for the achievemments that have been attained towards promoting the horticultural interests of the state.

James M. French, of Ellsworth, Washington, discussed "Pruning the Prune," and J. R. Shepard, of Salem, read a paper on "Some Features in Orcharding."

The United States Department of Agriculture, in compliance with a resolution, will be asked to undertake the scientific investigation of the application of water in Rogue River and Hood River Valleys. There is now a great deal of uncertainty among the horticulturists of these districts as to how much water, if any, should be applied to produce the best results. The time for irrigation is also a matter of some question. The Oregon delegation at Washington, D. C., will be asked to use its best efforts in securing the necessary appropriation for these experiments.

The need of concise, complete and definite water laws was likewise the subject of a resolution, presented by J. H. Lewis, State Engineer. Mr. Lewis set out in his resolution that the state has not yet assumed definite control of its great water resources; that the pioneer irrigators are unnecessarily burdened by having to defend their water rights in court against each new appropriation, and that the development of the state is greatly retarded by the lack of some method of definitely acquiring title to unused water in advance of the construction of hydraulic works.

The program also included addresses by President W. J. Kerr, of the State Agricultural College, Corvallis; "The Apple," A. I. Mason, Hood River; "A Commercial Box of Apples," E. H. Shepard, Hood River; "What I Know About the Dust Spray," H. C. Bushnell, Junction City; "Things I Want to Know," E. L. Smith, Hood River.

Officers Elected

Dr. J. R. Cardwell, honorary president; H. C. Atwell, Forest Grove, president; E. H. Lewis, Medford, first vice president; C. D. Huffman, La Grande, second vice president; E. R. Lake, Corvallis, secretary and treasurer.

The Apple Exhibit

Not the least important attraction of the meeting was the most creditable exhibitions of apples that have ever been shown at a similar gathering in this state. In all there were about 200 boxes of the very choicest of Oregon apples that had been entered in friendly competition. There was an especially keen contest on among the exhibitors of the Newtowns and the Spitzenbergs, although all of the other varieties so successfully grown were well represented. In connection with the apple exhibit, the Yamhill County Walnut Club had an excellent display of English walnuts, which the experience of these exhibitors has demonstrated can be produced profitably in this state.

Prizewinners

E. H. Shepard (Editor "Better Fruit" and grower), Hood River, Oregon—Sweepstakes, best five boxes, $50 in cash; Spitzenbergs (three tier), silver cup; Spitzenbergs (four tier), silver cup; Newtowns (four tier), silver cup; Spitzenbergs, Newtowns, Hydes King, Red Cheeks, Northern Spies, Sweepstakes medals, five varieties.

C. K. Marshall. Hood River, Oregon—Newtowns (three tier), silver cup; Wagner, medal; Ortley, medal; Ben Davis, medal.

L. E. Clark, Hood River, Oregon—Baldwins (three tier), silver cup; Red Cheek, medal.

C. J. Kurtz, Salem, Oregon—Winesap, medal.

A. Holoday, Scappoose, Oregon—Northern Spy, medal.

D. C. Van Dorn, Dayton, Oregon—Baldwins (four tier), medal; best five boxes Willamette Valley apples, prize.

R. H. Weber, The Dalles, Oregon—Winter Banana, medal.

A. Holoday, Scappoose, Oregon—P. Barry pears, special prize.

F. H. Hopkins, Central Point, Oregon—Winter Nelis pears, silver cup.

Thomas Prince, Oregon—English walnuts, special prize.

Judges—George L. Davenport of Davenport Bros., J. M. Koskey of McEwen & Koskey, and Professor C. I. Lewis.

Answer to Correspondent

Editor "Better Fruit"—Can you inform me where I can get the Kimball cultivator and Yucca tree protector?

CHARLES E. COMSTOCK, Sixprong, Washington.

[You can get the former from S. P. Kimball, Salem, Oregon, and the latter from the Yucca Manufacturing Company, 1380 Willow street, Los Angeles, California.—EDITOR.]

THE MAINTAINING OF PLANT FOOD IN THE SOIL

BY H. W. BURKE, OF THE R. M. KELLOGG CO., THREE RIVERS, MICHIGAN

"SHALL we meet the demand for more cotton, or shall it be grown in the valleys of the Nile and the Congo? The soil will answer. Shall we grow wheat for our increasing population, or shall we import from Canada? Soil conditions will determine. Is meat to be found on the tables of our working people in the future, or will the price be beyond their reach? Ask the question of the soil."—Secretary Wilson, speaking at Syracuse, New York.

Thus is the world's future — its strength, its happiness—dependent upon the soil, and by the soil we mean here the capacity of the soil to produce. All plant life and all animal life depend upon the amount of plant food contained in the soil. Deplete the soil of its fertility and the world goes hungry and mankind degenerates. Keep the soil full of life-giving substance and the world goes on in the march of progress to ever greater triumphs.

To keep up the fertility of the soil; to increase the fertility of the soil, then, is the most important material consideration in the world—one in which every man, woman and child in the world has direct personal interest. Important as it is, nature has made it a problem most simple of solution. A striking example of its simplicity is furnished by the case of the R. M. Kellogg Company strawberry plant farm at Three Rivers, Michigan. Recently a local lawyer declared: "When R. M. Kellogg bought that farm the land was so poor that it wouldn't raise an umbrella in seven years." Today it is one of the most fertile and productive farms in the world.

This extraordinary result has been accomplished in two ways—(1) rotation of crops in which legumes have alternated yearly with strawberry plants; (2) the application of fertilizer, principally barnyard manure. The farm comprises approximately 225 acres of land. Of this area about one hundred acres are set each year to strawberry plants. Because of its great area, this place is called a "farm." As a matter of fact it is a vast garden, cultivated as intensively almost as the hundred-foot square comprising the garden of a Japanese husbandman, and the crop produced is in point of commercial value greater than that generally obtained from twenty-five farms of equal size. No intelligent horticulturist longer doubts that plants grown under such intensive methods far surpass all others in producing big crops of berries.

NO. 1—FIELD OF ONE HUNDRED ACRES OF COWPEAS ON R. M. KELLOGG COMPANY'S FARM BEING ROLLED PREPARATORY TO PLOWING UNDER

When in the spring the hundred acres of plants are set out, they are placed in earth so soft and friable and so filled with plant food that growth, strong and vigorous, begins at once and continues throughout the season—so strong and so vigorous that the plants are enabled to stand up and make headway during weeks of drought through the simple protection of the dust mulch created by constant stirring of the soil. The year before the land in which these plants were set grew an enormous crop of cowpeas, or field peas, as the case may be. Taking it year by year, it is the experience of the Kellogg Company that the field pea gives the better results, the cowpea leading, however, in seasons of extended drought. This mass of green manure was rolled, disked, covered with about eighteen tons of Chicago stockyards manure and plowed under the previous fall, and in the spring the land was again plowed and then harrowed until it was as fine as an ash-heap.

Illustration No. 1 shows a field of cowpeas being rolled preparatory to plowing under. These peas indicate the amount of nitrogenous matter and great quantities of humus supplied by such a field of legumes. Illustration No. 2 shows twelve carloads of Chicago stockyards manure on the railroad tracks at Three Rivers. A force of Kellogg Company men and teams are at work hauling this manure to the farms, where it is evenly scattered with a spreader over the one hundred acres to be set to plants in the spring of 1908. These twelve cars are but a fraction of the total number used this fall. Fifty cars of horse manure, each containing thirty-five tons of this fertilizer, have been spread on the Kellogg farms this year at a total cost of $60 the carload.

Ask the soil on the Kellogg farms any question you may, and it will give you back a cheerful answer of the most substantial sort. And this is what every rod of arable land in this broad country of ours could do and should do; and it would do it if the methods were followed that so faithfully are adhered to on this big strawberry patch. Impossible on a big farm? Well, that may be true,

Continued on page 29

J. O. JEFFERY "Shipping the Big Red Apple by Express" by E. J. BRYANT

Fruit Lands
Improved and Unimproved
Timber Lands
Homesteads
Business Property
Residences

Splendid Opportunities for Business for the Right Men

JEFFERY & BRYANT, REAL ESTATE
NORTH YAKIMA, WASHINGTON

Owners of Tieton Fruit Land Under Government Canal Write for Particulars

WHAT NORTHWEST FRUIT GROWERS ARE DOING

THE Wenatchee Republic publishes an interesting story of prosperity from the orchards of that famous land of the big red apple. It states that the freight fruit shipments from that section for the year 1907 have aggregated 541 carloads. The express business shows that 300,899 boxes and crates were sent out. In addition it is estimated that there are 100 carloads of winter apples in the hands of the growers, to be shipped later when the prices are better. When reduced to a dollar and cents proposition the report shows that the orchards have returned about $760,250 to the people of Wenatchee Valley during the past year. Continuing, the same paper says: What a wonderful story of development is contained in the figures coming from the Wenatchee Valley. Only a few years ago an old-timer, passing through the valley, said he would not give $2 for the entire country. It was then a desert and had no signs of vegetation. It has been reclaimed by irrigation and the hand of man in directing the proper application of moisture to the growing crops. It is simply an object lesson for the homeless people of today. There are numerous opportunities open for every ambitious man who desires to make a home. They are not so far away as to be unapproachable. Thousands of acres within the borders of our state await the touch of the plows of civilization to convert them into profitable fields and productive orchard tracts.

Goldendale, Washington, which has been for some time the center of a wheat growing area, has taken up fruit growing, and recently was the scene of a large and enthusiastic horticultural meeting. One of the features was a large fruit display. Among the prizes awarded was a year's subscription to "Better Fruit." The exhibit of apples is said to have been a very creditable one, and is expected to stimulate the fruit growing business in that vicinity. With a main line railroad on the north bank of the Columbia, the Goldendale country looks for a rapid development.

Grants Pass, Oregon, Observer: H. D. Eisman, recently appointed County Fruit Inspector, gave notice that under instructions from Commissioner A. H. Carson, all persons are forbidden to sell or offer for sale diseased fruit after December 10. The intervening days were allowed for dealers to dispose of their illegal stocks. This sounds as though Inspector Eisman intends to perform the lawful duties of his office, and all progressive fruit men will uphold him in enforcing the law.

Medford, Oregon, will plant many fruit trees, according to Fruit Inspector Taylor of that place, who says that at least 5000 acres of fruit trees have been or are being set out in the Rogue River Valley about Medford this season. He expects the total number of trees to be planted will probably reach 500,000, and may exceed even this amount. "I have inspected 250,000 trees," said Mr. Taylor recently. "There are 70,000 more from two other nurseries awaiting inspection. In addition, many trees from outside nurseries have been planted that I have no record of as yet, but will have soon. The total number of acres planted may reach 6000 or 7000 before the planting season is ended. Two-thirds of the trees are pears, one-third apples, with a number of peaches, and a miscellaneous assortment of other fruits."

NO. 2—TWELVE CARLOADS OF CHICAGO STABLE MANURE ON THE TRACKS AT THREE RIVERS, MICHIGAN. PART OF FIFTY-TWO CARLOADS SPREAD ON R. M. KELLOGG COMPANY'S FARMS IN 1907

WINESAPS IN RAMMERMAN'S ORCHARD, GRANGER, WASHINGTON
This tree is only five years old. Its owner went to Granger Basin with less than $100, and is now reputed to be worth over $30,000, all made in six years. He has thinned out three-fourths of the apples on this tree, to allow the remainder to grow to full proportions, yet the remaining fourth are nearly breaking down the tree

Okanogan County, Washington, made a fruit shipping record last year. According to a recent report of County Fruit Inspector J. N. Piersey, there were 21,641 boxes of fruit (not including berries) shipped out of Okanogan County last fall. In the same report Mr. Piersey says that there have been 26,630 fruit trees inspected and delivered in the county this fall, and that the spring shipment of fruit trees is expected to be four times this number, as all the local nurseries will then make their deliveres.

North Yakma, Washington, fruit men are looking for another year of good crops and markets, and are preparing to share in them. Thousands of fruit trees will be set out this year all through the Yakima Valley, the total number of trees being estimated by Special Horticultural Inspector J. M. Brown at 1,500,000. As soon as the ground is in condition the orchardists will start work.

Payette-Boise Valley Fruit Union, an organization incorporated last summer and representing ninety per cent of the fruit shippers of Idaho, held a meeting January 31, for the purpose of electing an executive committee, which was chosen as follows: Michael Harris, Payette; C. J. Sinsel, Boise; W. A. George, Caldwell. The officers of the association who were chosen some time ago are: President, Fremont Wood, Boise; vice-president, Charles E. Paine, Roswell; secretary, C. C. Eiffe, Payette; treasurer, C. J. Sinsel, Boise. Later a meeting of the officers of the association was held and F. E. Price of Payette selected as manager.

The Dalles, Oregon, organized a horticultural association January 10 by electing George Cooper president, Edward Kurtz vice-president, C. L. Phillips secretary, A. E. Lake treasurer. R. H. Weber, Commissioner of Horticulture for the fourth Oregon district, was largely instrumental in getting The Dalles growers together for this purpose. In conjunction with other growers

he recognizes that The Dalles is fast becoming a great fruit producing district, and that an association of this kind will prove a great help to its members and others connected with the business. At a later meeting of the society it was decided to hold a cherry carnival during the cherry season.

Bitter Root Fruit Growers' Association, managed by H. Ferbrache, reports a successful year for 1907. Mr. Ferbrache in speaking of the work of the association recently said: "On the whole the association has accomplished some gratifying results and has met with good success, considering the circumstances. As a rule an association of this kind has to be organized several times, and certainly seldom proves successful the first year. The famous Hood River association was reorganized the third time before it became thoroughly established. The highest price received for apples was $1.75 a box. Being a comparatively new district the Bitter Root apple has yet to establish a reputation, and better results are looked for this year. The Dakotas, Kansas, Minnesota and Nebraska were found to be good markets this year for this section, and orchards there are soon expected to pay big returns.

LABEL AND MAT USED BY J. W. PERKINS,
One of the first fruit growers to use them in packing and shipping pears

Chelan County, Washington, Horticultural Association recently held an interesting meeting, presided over by J. F. Littooy, president. Among the talks made was one by M. O. Tibbits, who addressed the meeting on the importance of a standard pack. Z. A. Lanham gave the results of some spraying experiments and among other things said: "At Pullman in 1906 we shipped 9000 boxes of apples and lost 2000. During the past year we shipped 7000 boxes and did not lose one box on account of the apples being wormy."

Springbrook, Oregon, is one of the latest places to organize a horticultural society. The new organization starts with a membership of twenty-five, which is expected to be largely increased in a short time. Growers there are getting ready for spring spraying, and have received a carload of spray for this purpose. Cherries and berries are also a considerable part of the fruit crop at Springbrook in addition to the apples.

Mann Creek, near Weiser, Idaho, is the latest claimant to a fruit country that, it is said, will soon rival that of Hood River. The land to be used for this purpose is a large area along the creek, which is to be irrigated. This section is said to be immune from frosts and crop failures.

Puyallup's Union Berry Shippers held its annual meeting last month, and with the exception of A. A. Ayres of Sumner, elected the former officers, who are: President, B. Gaisford; vice-president, A. H. Kellogg; secretary, G. B. Fletcher. Board of control: I. N. Gaudreau, William Rucks, J. Schuler, Thomas H. Mayhew, Puyallup; Gust Anderson, Sumner.

Salem, Oregon, is said to have held a most interesting and instructive horticultural meeting during the past month, when M. O. Lownsdale, the well-known Willamette Valley orchardist, gave growers there a straightforward and practical talk as to what they should do to rejuvenate old, neglected and diseased orchards. By means of a stump of a tree, a grafting knife and some scions, he demonstrated the manner in which a new top may be produced on old roots. Mr. Lownsdale also gave a demonstration in apple packing.

Asotin, Washington, has reason to congratulate itself because of the work of George W. Ferguson, its fruit inspector, who made a campaign among growers there to get them to spray for the codlin moth, and who says in his report: "The apple growers throughout the county have made a most successful fight against the codlin moth. No trouble to find growers who claim ninety-five per cent free from the moth, while there are many who have accomplished even better results; however, there are a few doubting Thomases scattered over the county who let their crops be entirely destroyed by the moth. These people met with a surprise in the marketing of their product this fall, and I think that they will fall in line with their spray pump another season."

Douglas County, Oregon, fruit growers met for their annual session January 11 at Roseburg and elected officers for the ensuing year as follows: Joseph Wharton, S. N. Woodward, George Marsh, Mrs. C. H. Bristol, Louis Barzee, Frank Brown, H. N. Cobb, N. D. McCall, Joe E. Harvey. H. N. Cobb was re-elected manager for the coming year. The affairs of the association were shown to be in a very satisfactory condition and in order to make the work of the association more effective the capital stock was doubled.

Situation Wanted on a fruit farm by a boy of 18; good Chicago school education; one year on an Illinois farm; best of references; want to go West. Address Ralph Blanchard, 7120 Lowe avenue, Chicago, Illinois.

St. Helens Hall
Portland, Oregon
A GIRLS' SCHOOL OF THE HIGHEST CLASS
CORPS OF TEACHERS, LOCATION, BUILDING, EQUIPMENT THE BEST
Send For Catalogue

AGENTS WANTED
Can you sell goods? If so we need you. Complete outfit free; cash weekly. *Write for choice of territory*
CAPITAL CITY NURSERY COMPANY
SALEM, OREGON

OLDEST LIVERY COMPANY IN THE VALLEY
TRANSFER & LIVERY CO.
Special Attention to Commercial Men, Camping & Fishing Parties
TELEPHONE MAIN 131
HOOD RIVER, OREGON

CRIMSON WINTER RHUBARB
$1.50 per dozen; $6 per 100; $40 per 1000. Plant now and get returns next winter.
Pedigreed plants only. Berry plants all sorts
J. B. WAGNER
The Rhubarb Specialist Pasadena, Cal.

Stranahan & Clark
DEALERS IN
Commercial Fertilizers
Land Plaster, Lime
Plaster Paris, Cement
Building Plasters
Hood River, Oregon

WASHINGTON HORTICULTURAL SOCIETY MEETING

THE ANNUAL session of the Washington State Horticultural Society, which took place at Walla Walla January 29, 30 and 31, was in many respects the most successful meeting of that organization ever held. A well selected program had been arranged and was listened to with the greatest interest and attention by the large number of delegates present, of whom there were more than 500. Delegates were in attendance from all over the state, Yakima and Wenatchee being particularly well represented. President E. L. Stewart of North Yakima, Vice-President William A. Ritz of Walla Walla, Secretary L. G. Monroe of Spokane, and many other prominent fruit growers of the state, besides a large number of Oregon representatives, were also present.

On behalf of the citizens of Walla Walla, Mayor George Kellough extended to the convention in an appropriate address the privileges of the city during the three days which the convention was in session there. C. L. Smith of Spokane responded to Mayor Kellough's remarks, after which President E. L. Stewart delivered his annual address to the assembled delegates, briefly reviewing the work and growth of the association during the past year, and outlining some of the possibilities for the future.

Among the addresses made were: "Natural Cultivation," J. F. Littooy of Wenatchee; "Orchard Care and Cultivation," C. L. Smith of Spokane; "Conservatism and Diversification in the Orchard," Leigh R. Freeman of North Yakima; "Spraying for the Codlin Moth," Professor A. L. Melander of Pullman; "The Commercial Orchard: Growing and Marketing," J. L. Dumas of Dayton; "Association Work and the Commercial Value of a Good Pack," E. H. Shepard of Hood River, Oregon; "Fruit Packing," W. S. Offner of Walla Walla; "Fruit Handling," C. E. Nosler of Walla Walla, and Professor W. S. Thornber of Pullman; "Grape Culture," Dr. J. Hedger of Kiona; "Cultivation of the Early Strawberry," J. A. Rose of Kennewick; "General Discussion of Association Work," M. N. Richards of North Yakima, and A. J. Linville of Wenatchee.

LABEL AND MAT USED BY J. W. PERKINS

New Officers Elected

H. M. Gilbert, North Yakima, president; H. W. Crowell, Spokane, first vice-president; M. Horns, Wenatchee, second vice-president; William A. Ritz, Walla Walla, treasurer; L. G. Monroe, Spokane, secretary.

Spokane was selected as the next meeting place of the association.

Winners of Prizes

Class A—Ankeny cup: Best fruit display, Yakima.

Class B—Hover-Schiffner cup: Best five boxes, Chelan.

Class C—Up-to-the-Times cup: Best plate display, Spokane, Walla Walla, Valley.

Class D—Commission house cup: Best five boxes, J. L. Dumas of Dayton; second award, a barrel of Niagara Spray, Gavin Duncan, Walla Walla.

Class E—Falkenburg cup: Best plate display, Freewater.

Class F—Barrel Rex Spray: Best box of apples, Gavin Duncan, Walla Walla.

Farmer in Love With Harvey Springs

MR. T. W. SAWYER, who lives near Emerson, Alabama, certainly has fallen in love with his new pair of Harvey Springs, judging from what he says:

I can't say enough about Harvey Springs, nor can't understand how a heavy pair of springs can ride so easy with no load on them. My farm wagon rides as easy as my buggy. I can haul 1000 pounds more in my wagon than I could on the dead axle and do it easier. I would not take ten times the cost of them if I could not get any more of your springs. They are surely all you say about them, and lots more.

Mr. Sawyer is but one of the hundreds of progressive farmers who have discovered the comfort and money-saving qualities of the wonderful Harvey Bolster Spring, and it's only a matter of time till this sensible, practical equipment will be found on all the farm wagons in the country. Anybody who writes to the Harvey Spring Company at Racine, Wisconsin, can try a pair of these springs absolutely free.

The Sunnyside Nursery Company

Better Fruit Publishing Co., Hood River, Oregon:

Gentlemen—Enclosed find check for $25 for our advertisement, and will say that it is very well expended, as we have letters from many points in regard to our Spitzenberg apple trees, advertised in your valuable paper. All advertisers should take the fact home that you are not making your paper a local paper, but one that will and is reaching the fruit districts in all parts of the United States. I think you are doing a good work and should have the support of all wide-awake business men.

THE SUNNYSIDE NURSERY COMPANY,
Sunnyside, Washington.

OREGON
LIVE OAK
Will Beautify Your Grounds
2 to 3 feet, $3.00 each
3 to 6 feet, $4.00 each
Photo of our Mammoth tree, with samples of winter foliage, 25 cents
Six trees to one address, limit
BEN A. LOWELL
WOODVILLE, OREGON

JUST ADD WATER
To Noxall Prepared Spray Mixtures
And you are ready to spray. No dirt or bother in mixing; no waste.
NOXALL
PREPARED SPRAY MIXTURES, the best and cheapest. Those who use them use no other. Catalog describing fourteen different prepared spray mixtures manufactured by us, and illustrations of various insects and pests destructive to fruit and vegetable crops, mailed free
Quincy Spray Mixture Co.
Box 221-T Quincy, Illinois

SOMETHING NEW
Paper Berry Boxes
MOISTURE PROOF, ODORLESS, AND NO BREAKAGE
MANUFACTURED BY
J. W. GRASLE & SON
MILWAUKIE, OREGON

USE OF OIL TO DESTROY THE SAN JOSE SCALE

WE PUBLISH below a letter received from the American Horticultural Distributing Company, Martinsburg, West Virginia, which, as a matter of fact, is self explanatory. However, we wish to say we understand oils are being used quite extensively in the East for killing San Jose scale. This company publishes a very attractive little booklet, which contains some very general and useful information about the San Jose scale. Also a circular giving the personal experiences of growers who have used the Target brand. I believe every grower should get all the information possible about the diseases and post himself on the different sprays. The booklet and circular will be sent without charge to anyone upon receipt of request addressed to the American Horticultural Distributing Company, Martinsburg, West Virginia.

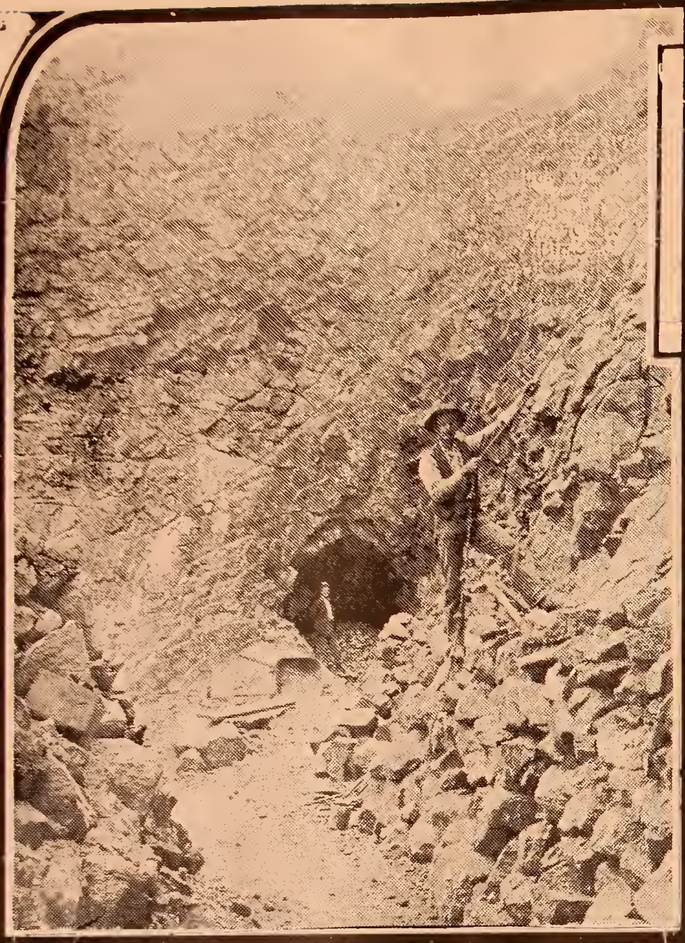
We are very glad indeed to send you information about Target Brand Scale Destroyer. Letters like the enclosed, which we are receiving daily from fruit growers in all parts of the country, show that wherever Target Brand has been well introduced it has completely taken the place of other remedies for the San Jose scale, because it has proved the most effective and economical and the least troublesome to handle.

Target Brand Scale Destroyer is a clear, heavy oil, which mixed with water forms a milk-white solution. The machinery for its manufacture was designed and patented by the president of this company, and the process is the secret of the chemist at the head of our laboratory forces. The materials from which Target Brand is made are by this process combined into an oil which mixes perfectly with water to form a spraying material that kills the scale and all sucking insects by coating them with a film of oil. This suffocates them but does not kill the trees.

The Target Brand preparation is to be applied to the dormant trees at any time during the fall, winter or spring months when the temperature is above the freezing point. The killing effect on the scale will, from the very nature of the material, be slow, but will be positive, and, if the spraying be thorough, your trees, even those now most seriously affected, will put on new life next summer. A little watchfulness on your part will discover if there be any scale which you did not hit with the spraying material, and the application of Target Brand wherever scale are found will easily and surely solve the San Jose scale pest for you. The enclosed order blank may be filled out and sent to us.

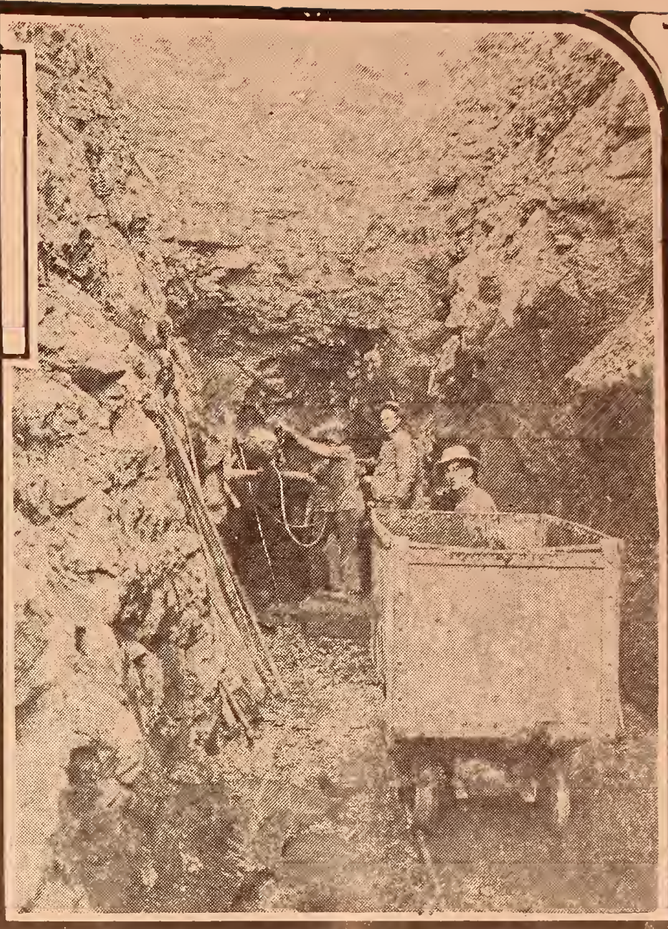
As to the quantity it will be necessary for you to order, one gallon of Target Brand and twenty of water make spraying material for from ten to forty trees, according to their size and condition. If you desire more personal information before ordering tell us about your trees, their number, age, size and amount of infestation, and we shall be glad to advise you how to treat them so far as we are able to do so without actually seeing the trees. Do not hesitate to write us. Very truly yours,

AMERICAN HORTICULTURAL DISTRIBUTING CO.

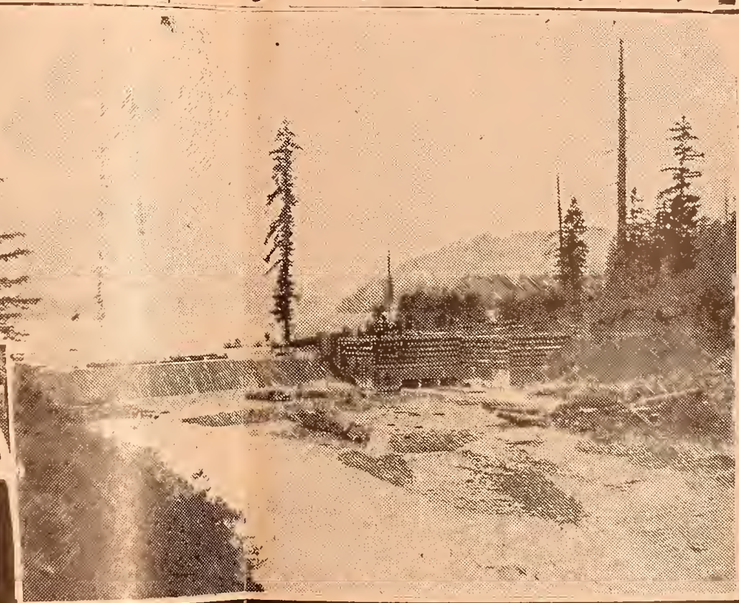


UPPER PORTAL OF STEEPLE TUNNEL NO. 2 MAN HANGING TO ROPE USED TO DESCEND FROM UPPER WORK

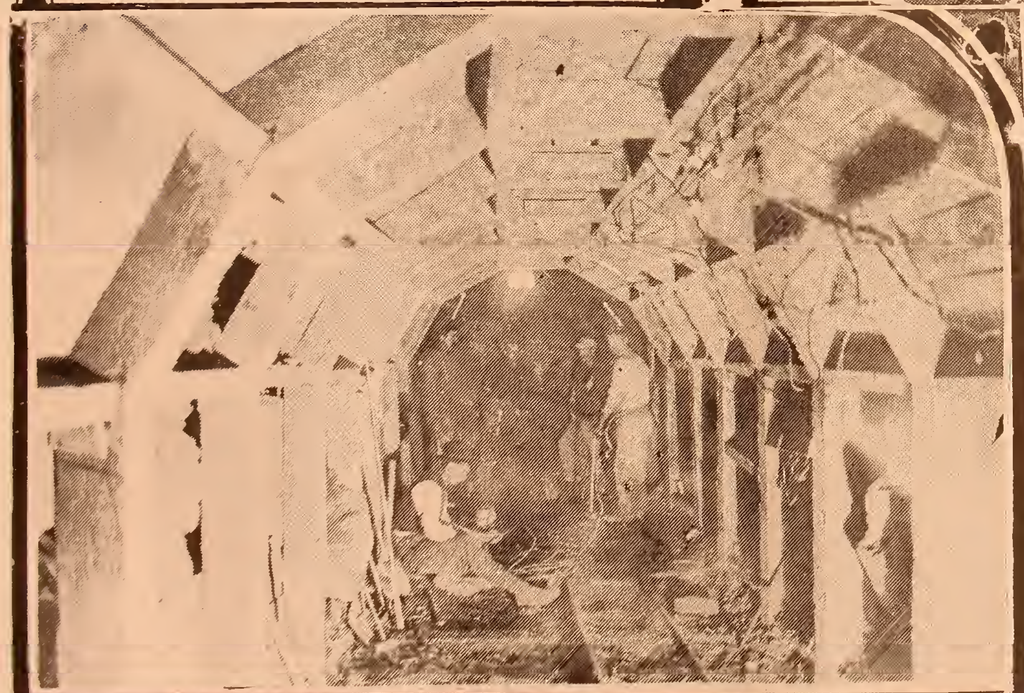
VIEW OF CAMP NO. 1, TIETON PROJECT LOOKING DOWN THE CANYON



ELECTRIC DRILL AT WORK IN THE LOWER PORTAL OF TRAIL CREEK TUNNEL TIETON PROJECT



LAKE KEECHELUS CRIB DAM FROM RIGHT BANK OF RIVER, SHOWING DOWN STREAM FACE AND APRON OF DAM



UPPER HEADING OF TIETON TUNNEL SHOWING TIMBERING

UNCLE SAMUEL'S BIG IRRIGATION ENTERPRISE IN YAKIMA VALLEY

OPEN WORK (ROCK) AT CAMP NO 5. TIETON PROJECT

LIST OF HORTICULTURAL SOCIETIES AND FRUIT GROWERS UNIONS FROM DIFFERENT SECTIONS

WE PUBLISH free in this column the name of any fruit growers organization or horticultural society, with the name of their secretary or manager. Secretaries and managers are requested to furnish particulars if omitted, for future publication.

Oregon

Oregon State Horticultural Society—E. R. Lake, Secretary, Corvallis.
Forest Grove Horticultural Society, Forest Grove —Col. Harry Haynes, Secretary.
Clackamas Horticultural Society — J. C. Zinzer, Secretary, Oregon City.
Mosier Horticultural Society—A. P. Bateham, Secretary, Mosier.
Medford Horticultural Society—L. B. Brown, Secretary, Medford.
Hood River Horticultural Society—J. L. Carter, Secretary, Hood River.
Marion County Horticultural Society—E. C. Armstrong, Secretary, Salem.
Linn County Horticultural Society—F. M. Mitchell, Secretary, Albany.
Polk County Horticultural Society — R. L. Chapman, Secretary, Dallas.
Yamhill County Horticultural Association—W. H. Kingery, Secretary, McMinnville.
Medford Fruit Growers Union—Medford.
Ashland Fruit and Produce Association.
Grants Pass Fruit Growers Union—Chas. Meserve, Secretary, Grants Pass.
Hood River Fruit Growers Union—E. H. Shepard, Secretary and Manager, Hood River.
Hood River Apple Growers Union—H. M. Huxley, Manager, Hood River.
Grande Ronde Valley Fruit Growers Union, La Grande, Oregon—E. Z. Carbine, Secretary.
Milton Fruit Growers Union, Milton—W. C. Hopson, Secretary.

Washington

The Thurston County Horticultural Society—C. D. Sullivan, Secretary.
Waterville Horticultural Society—Ben Spear, Secretary, Waterville.
Yakima County Horticultural Society—E. E. Samson, Manager, North Yakima.
Spokane County Horticultural Society—L. G. Monroe, Secretary, Spokane.
Snohomish County Horticultural Association — C. L. Clemens, Secretary, Snohomish.
Sultan Horticultural Society, Sultan—Thos. Musgrove, President.
Kennewick Fruit Growers Association — W. S. Jenkins, Manager, Kennewick.
Wenatchee Fruit Growers Union—J. B. Olinger, Manager, Wenatchee.
Puyallup and Sumner Fruit Growers Association —W. H. Paulhamus, Manager, Puyallup.
Vashon Island Fruit Growers Association—C. J. Prior, Secretary, Vashon.
Fruit Growers Association—Shelton.
Spokane Fruit and Vegetable Growers Association —Spokane.
White Salmon Fruit Growers Union—Carl Ross, Manager.

Idaho

Southern Idaho Fruit Shippers Association—C. J. Sinecl, Secretary, Boise.
New Plymouth Fruit Growers Association—A. R. Ingalls, Representative, New Plymouth.
Payette Valley Apple Growers Union—J. A. Bower, President, Payette.
Thurston County Fruit Growers Union—Fred W. Lewis, Secretary, Tumwater.
Bay Island Fruit Growers Association — H. McGavick, Manager, Tacoma.
Whatcom County Fruit Growers Association — J. H. Kirkpatrick, President, Curtis.
Yakima Valley Fruit and Produce Growers Association, Granger.
Buckley Fruit Growers Association—J. B. Frost, President, Buckley.
Lewis River Fruit Growers Union, Woodland.
Okanogan Fruit Growers Association, Okanogan—W. E. Kirkpatrick, President; Jack Evans, Secretary.
Mason County Fruit and Produce Union, Shelton —A. A. Linton, President; S. Schumaker, Secretary.

Utah

Syracuse Horticultural Society, Syracuse—W. H. Miller, President; Wm. Wilcox, Secretary.

Colorado Fruit Associations

San Juan Fruit and Produce Growers Association, Durango, Colorado, and Farmington, New Mexico—J. M. Kingsley, Manager.
Fremont County Fruit Growers Association, Canon City—Geo. Sailey, Manager.
Rocky Ford Melon Growers Association — A. C. Sloan, Secretary, Rocky Ford.
Plateau and Debeque Fruit, Honey and Produce Association, Debeque—H. A. Stroud, Manager.
Montrose Warehouse (shipper of fruit)—Robert Halley, Manager, Montrose.
Surface Creek Fruit Growers Association, Austin.
Longmont Produce Exchange—R. D. Jenkins, Manager, Longmont.
Manzanola Fruit Association—Ed McClain, Secretary, Manzanola.
Delta County Fruit Growers Association — Geo. Conklin, Manager, Delta.
Boulder County Fruit Growers Association—E. T. Carr, Manager, Boulder.
Fort Collins Beet Growers Association—Chas. R. Evans, Manager, Fort Collins.
La Junta Melon and Produce Company—J. O. Wood, Secretary, La Junta.
Rifle Fruit and Produce Association, Rifle.
North Fork Fruit Growers Association, Paonia—W. H. Garvin, Manager.
Fruita Fruit and Produce Association—E. J. Dalton, Manager, Fruita.
Grand Junction Fruit Growers Association, Clifton. Palisade, Grand Junction—J. F. Moore, Manager.
Palisade Fruit Growers Association—Geo. Scroggins, Manager, Palisade.
Independent Fruit Growers Association — Grand Junction—Ferbrache, Manager.
Peach Growers Association, Palisade.

Canada

British Columbia Fruit Growers Association—W. J. Brandrith, Secretary, Ladner, British Columbia.
Georgian Bay Fruit Growers Association—J. G. Mitchell, Secretary, Thornbury, Ontario.
Ontario Fruit Growers Association—P. W. Hodgetts, Secretary, Toronto, Ontario.
Quebec Fruit Growers Association — Dr. W. H. Wood, St. Johns, Quebec.
Nova Scotia Fruit Growers Association—S. C. Parker, Secretary, Berwick, Nova Scotia.
Prince Edward Island Fruit Growers Association—A. E. Dewar, Secretary, Charlottetown, Prince Edward Island.

EXPERIMENTS WITH FERTILIZERS ON PRUNES

THE Oregon Experiment Station has recently published the results of some experiments with the use of fertilizers on prune trees. These experiments were conducted for a period of four years on an Italian prune orchard. The soil is the characteristic loam found in most orchards in the Willamette Valley. Alternate rows throughout the entire orchard were treated with nitrate of soda, Thomas slag, muriate of potash and sulphate of potash, either alone or variously combined. As may have been anticipated, no marked effects from the different combinations of fertilizers were noticed and the results were not decided enough to allow one to draw any other conclusions than that conditions of the experiment were not such as to afford practical information. There were two reasons which may be assigned for the failure of securing valuable results from the use of these combinations. First, the soils of the Willamette Valley and the Pacific States generally are nearly all rich enough to grow young fruit trees amply without fertilizers; second, the trees with which the experiment was conducted were young and these not only grew well, but also produced good fruit without fertilizers. The experiment should have been conducted upon an old orchard instead of a young orchard. It is only under such conditions that any practical demonstration could show results of importance.

The experiment is of such importance that it should be repeated in the manner indicated. There is little question but that the combination of fertilizers including all three elements, and especially nitrogen and potash, would show very favorable results on old prune orchards, as well as upon old apple orchards in the Willamette Valley.

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HOOD RIVER, OREGON

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MANUFACTURERS OF
STENCILS
AIR CUSHION RUBBER STAMPS, RUBBER TYPE, NOTARY, LODGE AND CORPORATION SEALS
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OVER FORTY VARIETIES OF STRAWBERRIES, RASPBERRIES, BLACKBERRIES, PHENOMENALS, LOGANS, CURRANTS, VICTORIAS, MAMMOTHS, DEWBERRIES, ETC.

J. O. HOLT EUGENE, OREGON

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ALL KINDS OF SEEDS

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HOOD RIVER, OREGON

CANNERY NOTES OF SEVERAL FRUIT SECTIONS

EVERETT is soon to have her first fruit canning factory, for J. A. McGhie, N. B. McGhie and S. B. McGhie have incorporated the Everett Preserving Company with a capital of $50,000. The plant is to be installed on the property owned by McGhie brothers in Lowell. The company intends perfecting arrangements so as to be in readiness for the fall season, when active canning will be begun.

Dallas, Oregon, is also after a cannery, and a movement is under way to secure the co-operation of the fruit raisers in that district. Enough fruit, it is stated, is raised within a radius of five miles of Dallas to support a cannery during the entire season. To secure it a company will be formed consisting of fruit growers, farmers and business men in and near Dallas.

A meeting of the stockholders of the new Monroe (Oregon) Cannery Association was held recently, when it was decided to erect suitable buildings for installing the necessary machinery in time for the coming season's crop of fruit and vegetables.

Roseburg is soon to have another industry added to its list of enterprises. The H. S. Gile Fruit Packing Company, of Salem, has recently completed all preliminary arrangements for the construction of a large and modern fruit packing house in that city.

At a meeting of the Buckley Fruit Growers' Association held recently it was decided to establish a cannery on a small scale there this year.

At the annual meeting of the Washington Fruit and Vegetable Canners' Association, held in Seattle January 4, the following officers were unanimously elected: President, H. John Boshaw; first vice president, Dr. C. Jones; second vice president, W. A. Ritz; third vice president, E. W. Robinson; secretary, Andrew Weber, of Seattle.

The cannery at Grants Pass, Oregon, which had a most successful season last year, is making preparations already for the coming season. New officers and directors were recently elected to manage the plant this year and it will be opened in time to take care of the early fruits and vegetables.

At a recent meeting of the Clackamas County Horticultural Society a committee was appointed to obtain a suitable location for a cannery. It is stated that many hundreds of bushels of fruit are yearly wasted in Clackamas County on account of the lack of a cannery. If a proper site and finances can be secured it will be built.

The cannery erected at Sedro-Woolley, Washington, is said to have been a paying investment during the past year and the stock put up of the highest grade. Contracts are already being made for products during the coming season. It is expected to commence operations June 1.

A committee was appointed at a cannery meeting held at Burlington, Washington, recently, to have a cannery erected in time to take the surplus products of next season's crops.

TOPPENISH, WASHINGTON, AS A FRUIT DISTRICT

TOPPENISH, Washington, is the shipping point for the splendid fruit belt in the Parker Bottom and Zillah districts, and is also the railroad center of the Indian reservation. It has more irrigable land tributary to it than any other point in the Yakima Valley. In addition to the fruit shipments, hay, potatoes and cantaloupes are sold in immense quantities, the amount of hay shipments being limited only by the number of cars that could be secured. The development of this land has been delayed on account of the Indian ownership of the land, but within the past year title has been secured and a city platted and incorporated, and a large number of buildings erected. Many fine homes are being constructed, and at the present time seven brick buildings are being erected. The city is erecting a suitable city hall, and a large hotel and stores are being completed. There is a splendid opening for business and professional men in this rapidly developing fruit district.

THE John Deere Plow Company, which has a place of business in Portland, Oregon, calls attention in another column to its excellent wares and particularly to the New Way Motor Sprayers. In speaking of its features their catalogue says: The New Way Power Sprayer has no experimental features. We use standard spray pumps only, made by the best known pump makers. Either the 2 to 2½ or the 3 to 3½ horse power New Way engine is used and can be quickly detached. The 3 to 3½ horse power weighs fifty pounds more and costs but little more than the smaller size, and we recommend its use because it furnishes an abundance of surplus power for the sprayer, and is the size most useful for other work.

HORTICULTURAL MEETING HELD AT EUGENE

ONE OF the largest and most successful horticultural meetings held during January took place at Eugene, Oregon. The court house, where the meeting was held, accommodated those who were anxious to be present with difficulty, and the addresses were listened to with the closest interest. Among those who spoke were Dr. D. A. Paine, who was chairman of the meeting; H. M. Williamson, secretary of the State Board of Horticulture; Professor Claude I. Lewis, of the Oregon Agricultural Experiment Station; Wilbur K. Newell, president of the Oregon State Board of Horticulture; J. Beebe, fruit inspector for Lane County; E. H. Shepard, editor of "Better Fruit," and Professor A. R. Sweetser, of the University of Oregon. The meeting is expected to result in much good in advancing the development of Eugene as a fruit country, and to stimulate growers there in raising better products.

MONEY IN BERRIES

THIS adv. will appear but once. Largest red raspberry, greatest yields, good shipper, fine flavor, long season. For prices write to J. F. Littooy, Wenatchee, Washington.

BETTER FRUIT

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PUBLISHED IN THE INTEREST OF UP-TO-DATE
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ADVERTISING RATES ON APPLICATION

Entered as second-class matter December 27, 1906, at the postoffice at Hood River, Oregon, under act of Congress of March 3, 1879

THIS being the idle season of the year for the fruit grower, many horticultural and growers' meetings have been held during the past month. From all sections come reports of these meetings. Districts that have never before had a horticultural society or association have organized, and those which have them have held rousing meetings, elected new officers and reawakened interest in both the theoretical and practical parts of the business. There is nothing that accomplishes more good for the grower than an interchange of methods and ideas relating to practical experience. While one grower may know many things that are helping to make him successful, he may be ignorant of others that his neighbor knows and which can be imparted more generally and thoroughly at sessions of the local organization than in any other way.

THREE hundred enthusiastic fruit growers and business men, with a carload of visitors from Portland, including Governor Chamberlain of Oregon, banqueted at Hood River Friday evening, January 31. The banquet was given by the Hood River Commercial Club, and we do not think it is stretching the point to say that no more intelligent body of fruitmen could be found anywhere than was gathered around the festive board on that occasion. While many topics were on the program for speechmaking, speakers sooner or later reverted to the all absorbing question at Hood River, that of fruit growing, and both locally and generally it was their opinion that the fruit industry of Oregon is but yet in its infancy, with great things in view for it in the near future.

THE CHILDLESS home and the homeless child. Here is an opportunity to kill two birds with one stone. The publication "Life" annually collects a fund to give the orphans of New York City a summer outing. There are many opportunities for those who wish to do good in the world, either with their wealth or their time. Carnegie gives big libraries, Rockefeller gives colleges, others give churches. If we were wealthy our millions would go to hospitals. None of the others are necessities. We can be intelligent without big stone libraries. We can get a good education without expensive colleges. We can get religion without magnificent cathedrals. But we cannot get well if we are sick without nursing and medical care. If we were wealthy enough we would start a hospital fund for the poor—for the man who is busted and gets sick. We are not blessed with wealth, but have a share of good health, and can give some good wholesome advice occasionally. We therefore make this suggestion—let every fruit grower without children bring up some homeless child. Every big city has a children's or orphans' home, whose business is to gather in the orphans, find homes for them, and "bring these little ones into the homes where they are needed."

PROBABLY there is no section of the great Northwest fruit growing district that is developing more rapidly than the Yakima Valley. One hundred and thirty miles long and almost fifty miles wide at some points, it is being transformed into a mammoth orchard by the introduction of irrigation. Great projects now under way and proposed are making this possible. Some idea of their magnitude can be gained from our pages this month. Another feature that is doing much to develop the Yakima country is the very near probability of the construction of two transcontinental railroads through this fertile section, the Chicago, Milwaukee & St. Paul, and the Canadian Pacific both being said to have perfected plans to traverse the Yakima Valley.

TWO CENTS. Mr. Orchardist, will you let two cents a week stand between you and a better crop, and a better price on every box? Two cents a week means a dollar a year; that's the subscription price for "Better Fruit." A single new idea may bring a better price on every box, and that counts up fast. "Better Fruit" is full of good ideas and methods. You may know some, but no man knows it all; we can learn from the other fellow. "Better Fruit" gets the ideas of all the other fellows together for you, and this only costs you two cents a week.

HAVING had a number of inquiries from persons desiring to get copies of the book of sonnets entitled "Where Flows Hood River," recently written and published by Miss Marion Cook, we wish to state that it can be obtained from Miss Cook, 671 Schuyler street, Portland, Oregon; J. K. Gill & Co., Portland, Oregon; and George I. Slocom, Hood River. The price of the book is $1 unboxed, and $1.25 boxed, the former requiring 8 cents postage and the latter 9.

THE Shenandoah Nurseries, D. S. Lake proprietor, of Shenandoah, Iowa, announces its desire for a share of the patronage of Northwestern fruit growers in this edition of "Better Fruit." This company makes a business of supplying all kinds of nursery stock of all varieties.

TRAINED men are in great demand in orchard work. The opportunity is great in this industry. The editor of "Better Fruit" has had hundreds of requests for just such men, but they are scarce—large orchardists are on the lookout for them continually. Men who are successful in their business or profession in the cities, with a view to spending the best part of their lives in comfort, free from worry, are rapidly investing in fruit lands. The successful man in the big city realizes that the reaction will follow the strenuous life and is rapidly preparing for the breakdown, when it comes, by buying fruit land and planting orchards. He is buying fruit lands and setting orchards for two reasons, for he knows the life of the fruit grower in the country—the simple life, so to speak—is the personification of health, and what is equally important he knows that no other legitimate investment is safer or will pay a greater per cent on the amount invested. They want learned men. Subscribe to "Better Fruit" if you don't own your own orchard, and become a learned man, prepare yourself to take one of these jobs.

SUCCESSFUL annual meetings characterized the sessions of the Oregon and Washington State Horticultural Societies. Both were more largely attended than ever before, better programs arranged, and better addresses made. The fruit exhibitions in connection with them are said to have been superior to those held in previous years, and demonstrated that more attention is being paid to packing, grading and other essentials in putting fruit products on the market in the most attractive package. These features have largely made the market for the fancy fruit of the Northwest, and by improving and maintaining them the bugaboo of overproduction or unprofitable prices can be safely laid to rest for all time.

YOU CAN'T stand still, because to stand still means to go backward. You must therefore go ahead or go backward. You must keep up with the procession or drop out. Nearly all professions love their journals. Nearly all lines of business have class or trade papers. Successful men not only take them but read them. Orchardists love their papers, too. Are you a subscriber? If you are, do you wish a better fruit paper? Of course you do. Subscribe to "Better Fruit."

WE WISH to acknowledge the receipt of handsomely illustrated catalogues giving prices on seeds and materials in connection with the fruit business: R. M. Kellogg & Co., Three

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Send for a FREE Three Months Trial to America's leading fruit paper, The Fruit-Grower, and we will mail booklet telling how to get a tree of Delicious Apple and a vine of Banner Grape, FREE. Two of the best fruits ever introduced, hardy all over the country, finest quality. Delicious Apple sold last season at $6 a box. If you have only a few trees or plants you need this paper. Tells all about fruit—how to plant, cultivate, prune, spray, pack, market. Regular price $1.00 a year, and two new fruits included free, but will make special offer if you answer this ad.

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Send your paper three months FREE on trial, after which I will notify you to stop or become a subscriber.

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THANK YOU, "Better Fruit" is a success typographically, practically, advertisingly and subscriptionly. We have tried to do our part well to the best of our ability and our aim is always to do it better, but we are not conceited, and we realize that without our friends who have wanted a better fruit paper, and have shown their desire in a significant way by not only getting fruit growers to subscribe, but by actually taking their subscriptions and sending them in, we could never have been able to give you the splendid paper we are putting out. Hundreds of growers have canvassed for "Better Fruit" and sent in subscriptions galore. To all of these we wish publicly to express our sincerest thanks.

BETTER FRUIT certainly has just cause to feel proud of itself. That it is a success no one can deny. Its appearance speaks for itself. The handsomest fruit paper in the world, expensive ink, elegant book paper, artistic engravings, high class printers, all come high, but the fruit growers of the famous fruit districts of Hood River, Rogue River, Willamette and Grand Ronde Valleys in Oregon, Yakima, Wenatchee, Chelan, Okanogan, Clarkston, Spokane in Washington, Southern Idaho, all demand something "better" in the way of a fruit paper, than any other fruit country, and "Better Fruit" fills the bill, so they say.

THE WINTER SHORT COURSES AT THE OREGON AGRICULTURAL COLLEGE HAVE BEEN A SUCCESS

THE WINTER short courses at the Oregon Agricultural College have been very successful. Over one hundred students were registered in the different courses, as follows: General agriculture, 31; dairying, 27; horticulture, 12; mechanics, 10; household economy, 27; total, 107.

Some fifteen counties in the state are represented in the attendance. Several came from Washington State, one each from British Columbia, Kansas and New Jersey. Each afternoon four lectures were given by different members of the agricultural staff. In addition, prominent men of the state, engaged in different lines of agriculture, addressed those in attendance on the general agricultural course. Mr. M. O. Lownsdale spoke on "The Old Orchard," Mr. Ferd Groner on "Tile Drainage," Mr. W. K. Newell and Mr. H. M. Williamson on "Horticulture," Mr. J. R. Shepard on "Swine Raising," Hon. J. W. Bailey on "Dairying," Mrs. Clara H. Waldo, lecturer of the Oregon State Grange, on "Women's Work on the Farm"; Mrs. Austin T. Buxton on "The Farm Home," Mr. E. H. Shepard, editor of "Better Fruit," on horticultural topics. The subjects of animal husbandry, field crops, bacteriology, botany, plant diseases, chemistry, county roads, poultry keeping, were treated by members of the faculty.

ONE OF the largest and highest priced sales of apples made in Oregon this year is that reported by Page & Son, who paid $60,318.70 for 25,603 boxes. This is very close to an average price of $2.40 per box, and is thought to be the record price paid in Oregon this year for this fruit. It has been said that Portland apple buyers would not pay the high prices of their Eastern competitors, but this purchase of Page & Son shows that this idea is erroneous. In addition to this purchase the Page company bought many thousands of boxes of apples at prices ranging from $1 to $1.50 per box.

THE MAINTAINING OF PLANT FOOD IN THE SOIL

Continued from page 20

so far as quantity of fertilizer is concerned, though the principle is universally right. But if you can make fifty acres grow as big crops by intensive methods as you are now receiving from your hundred acres, wouldn't it be better from every point of view? And would not posterity be the gainer in vast degree? There is no mystery about this, and there is no genius required to keep up the fertility of the land. Over in France are farms that were under cultivation when Caesar and his armies overspread the land. By practical methods of fertilization—the careful saving and intelligent use of every particle of fertility available—the thrifty farmers of ancient Gaul and their patient and faithful successors not only maintained, but positively increased, the fertility of the soil, until today these lands are yielding the most bountiful crops known to history.

Secretary Wilson has asked some pertinent questions. But the answer must come from the farmer himself. What are you doing, Mr. Farmer, to make your soil better, stronger, more productive of the world's necessities than it was last year? The soil will answer every question with a smile if you will do your duty.

Niagara Lime and Sulphur

HOOD RIVER, OREGON, July 27, 1907.

Oregon Spray & Gas Company, Portland, Oregon—Gentlemen: Replying to your inquiry of recent date, will say that so far as I know the "Niagara" Lime and Sulphur Solution has given general satisfaction in Hood River. Some parties say that it has not killed the aphis to the extent expected, but weather conditions seem to have caused more aphis this year than usual, and I do not think that the condition can be blamed to the spray at all. So far as I know the spray has killed the scale. It has done the work on my place and on other places that I know of. I am glad to hear you are going to put in a plant here for the making of Niagara Spray; it certainly will be well supported by Hood River fruit growers. Yours truly, WILLIAM KENNEDY.

L A N D

OF BIG, RED APPLES

WE ALWAYS HAVE SOME

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At popular prices and sell them strictly on their merits. Years of study given to Hood River and its products. Can sell you intelligently. Call on or address

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FRUIT LAND

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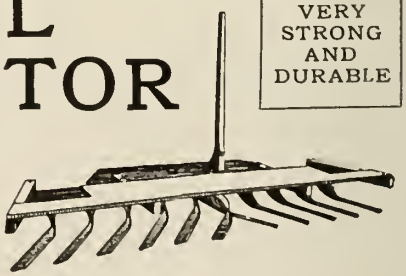

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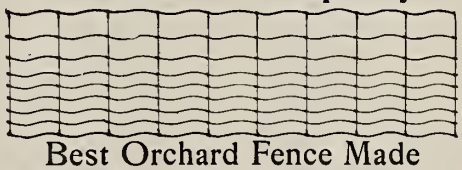

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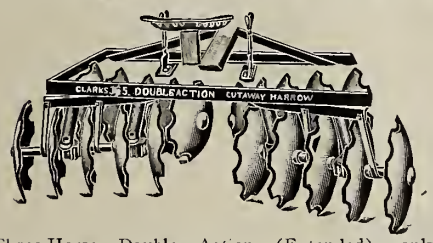

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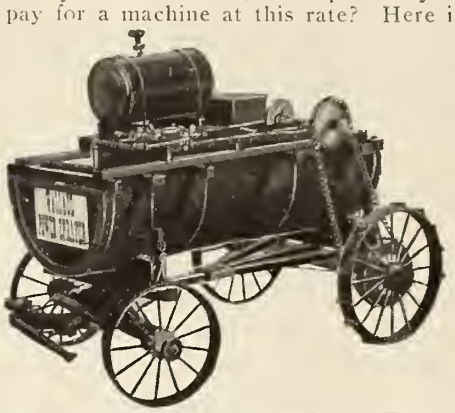

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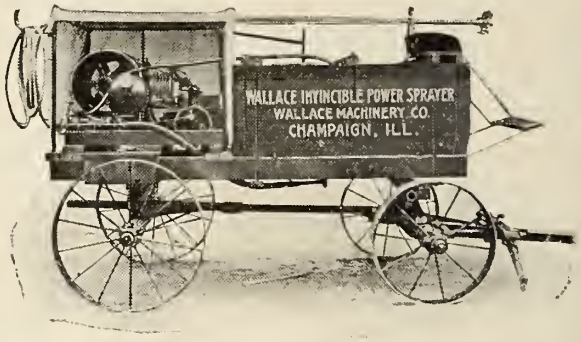

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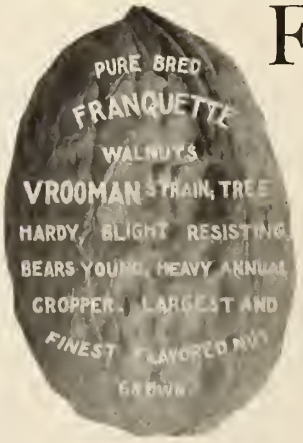

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"Better Fruit"	1.00
Both	$1.00
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"Better Fruit"	1.00
Both	$2.00
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Both	$1.00
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Both	$1.00
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It doesn't take **30 seconds** to slip a pair of **Harvey Bolster Springs** under your wagon-bed and forever **end** the **continual bumping** and **wear and tear** which soon puts any wagon out of business. You can save many a dollar by marketing your **potatoes, eggs, fruit,** etc., in a wagon that doesn't jam, break and bruise them, for it is a well-known fact that truck-buyers pay ¼ to ⅓ less for fruits and vegetables which are marketed in a wagon without springs. With **Harvey Springs** on your wagon you can bring home **furniture, glassware,** etc., without getting it scratched or smashed to pieces. Why not save money and at the same time **ride easily** and **comfortably** on **long-lasting Harvey Springs!**

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HARVEY BOLSTER SPRINGS are scientifically made, leaf by leaf, from the **very best** tempered steel. We **positively guarantee** every pair to give satisfaction in every way. **TRY THEM AT OUR RISK!** We want you to use Harvey Springs on your wagon **FREE** for 30 days to find out for **yourself** that they're everything we claim—**just as good** as we tell you they are. This trial **won't cost you a penny.** Drop us a postal, giving weight of your heaviest load and your **dealer's name,** and we'll send you our catalogue and arrange with him to give you a set on **30 Days' Free Trial.** Be sure to write TODAY—before you lay down this paper. **Harvey Spring Co., 555 17th St., Racine, Wisconsin**

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PURE PARIS GREEN for Chewing Insects
CALIFORNIA WASH for San Jose Scale
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BORDEAUX MIXTURE for Rot, Blight and Mildew
KEROSENE EMULSION for Sucking Insects, Lice
Put up in convenient sizes, and at RIGHT PRICES

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The Largest Manufacturers of Agricultural Sprays in the U. S. NEW YORK CITY, N. Y.

"A Wise Investment is Often More Profitable Than a Life's Labor"

Two thousand acres of level and fertile land in one entire body in wild hay, will be under Government water system, nicely situated for subdivision; a good speculation. Price for entire tract, $15.00 per acre. Two hundred and seventy acres fruit or alfalfa farm, mostly Rogue River bottom land, about 100 acres already in alfalfa, which will raise four crops a season; good buildings; 200 acres under ditch owned by the place, with plenty of water. Price, per acre, $60.00.

Seven hundred-acre farm on Rogue River, 250 acres in cultivation, 40 acres in alfalfa; large and good buildings and right on the Southern Pacific Railroad. Price for the entire tract, $30.00 per acre.

We have many thousands of acres of fertile lands for sale at reasonable prices

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FIFTEEN MILLION STRAWBERRY PLANTS

Seventy-five varieties. If you want over ten thousand plants we make you a very low special price. Big forty-eight page catalogue free

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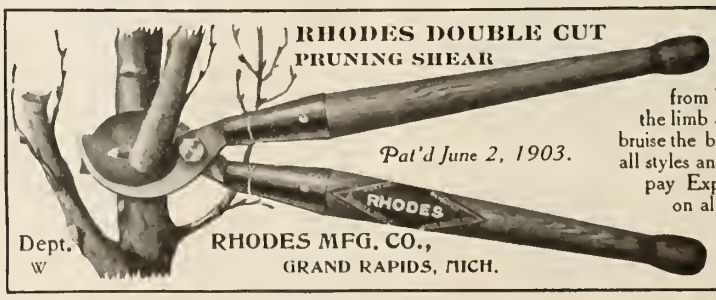

THE only pruner made that cuts from both sides of the limb and does not bruise the bark. Made in all styles and sizes. We pay Express charges on all orders. Write for circular and prices.

THE BEST SPRAY IS THE CHEAPEST SPRAY EVERY TIME

Isn't it mighty poor business policy to try to save a fraction of a cent per tree by using some cheaply made or inferior spray, and run the risk of losing several dollars per tree? **IN EVERY FRUIT GROWING SECTION**

REX LIME AND SULPHUR SOLUTION

Has proved to be the **best quality** spray ever made or used, and it covers a wider range of insect and fungus troubles than any other known spray.

FRUIT GROWERS should beware of imitations. During the past five years we have known of numerous **experimenting,** would-be "imitators" proclaiming to the public that they had a lime and sulphur spray "as good as REX," and in every single case tests have proven them to be very inferior stuff, and their use has proven to be very expensive business for those who used the stuff.

NOTE CAREFULLY THE FOLLOWING: Rex Lime and Sulphur Solution is **over thirty per cent stronger and more concentrated** than was considered, according to the fixed laws of chemistry, possible to make. You can understand from this that it is not easy to "imitate" or equal, and as a protection to fruit growers and ourselves against the cheaply made, inferior "imitations," we have applied for and been granted a patent covering our entire equipment for making Rex Lime and Sulphur Solution. "Rex" contains a much larger percentage of sulphur in **sulphide** form than any other lime and sulphur solution ever known, and all authorities agree that it is the sulphur in **sulphide** form that measures the merit of any lime and sulphur spray.

THE WIDE RANGE OF ITS VALUES—No other spray covers so wide a range of insect and fungus troubles. When you spray with Rex Lime and Sulphur Solution you not only control the insect or fungus trouble sprayed for, but you also get further protection against many other insect and fungus troubles likely to injure your trees or fruit if you did not use "Rex," and every year new troubles begin, and troubles that Lime and Sulphur is the surest remedy for.

ITS USES cover and control San Jose Scale, Italian Pear Scale, Oyster Shell Bark Louse, Iecanium Scale, Howard Scale, Green Aphis, Apple Scab, Pear Scab, Bitter or Ripe Rot of the Apple, Leaf Blight, Powdery Mildew, Peach Leaf Curl, Peach Scab, Brown Rot of the Peach, Shot Hole Fungus, Peach Twig Borer, Peach Moth or Bud Worm, Plum Curculio, also Blackberry, Raspberry and Currant diseases, etc., etc.

TO GRAPE GROWERS—In Rex Lime and Sulphur Solution we offer you the best and cheapest protection you can possibly get against **Black Knot** and **Grape Mildew.** We have never known of a single grape grower who has used it that does not consider it the cheapest and very best thing he has ever used for **Black Knot** and for **Grape Mildew,** and large numbers have used it and thoroughly tested it.

BORDEAUX INJURY—The State Experiment Station of New York has recently published a very large bulletin devoted entirely to **Bordeaux Injury** of trees and fruit, showing that the use of this poison spray runs into a loss of thousands of dollars every year. Every year will see less Bordeaux used and more of Rex Lime and Sulphur Solution for summer as well as for winter spraying, because it is definitely known that Rex Lime and Sulphur Solution is non-poisonous, and is a lasting tonic and benefit to the trees and fruit.

Judge Forney of the law firm of Forney & Moore, Moscow, Idaho, has ten acres of apples, all Jonathans. The past year he used "Rex" with better results than Bordeaux, and as a further test took two rows of his trees and when apples were of fair size sprayed "Rex" all over the apples (the proportions used, we believe, was 1 to 19). They developed in perfect form and finished in color under the solution perfectly. The solution remained on the apples until picked, and with a common cotton canvas glove on the hand rubbed off the solution without trouble, and not a mar or scar was left on a single apple. The test was made for two reasons. First to see if eggs would hatch on the apples covered for second brood or third brood, and to see if "Rex" would russet or scald the apples. He had no worms, and every apple was practically perfect. This test was made after first spraying being done with arsenate of lead. Mr. Forney has cut out Bordeaux, and says he will use "Rex" hereafter for **Scab** and as a **General Fungicide,** and many are doing the same thing. We very respectfully invite the patronage of all growers of fruit, grapes and berries. **Write for FREE BOOKLET** Rex Lime and Sulphur Solution is made only by

THE REX COMPANY, Benicia, California, and Omaha, Nebraska, and YAKIMA REX SPRAY COMPANY, North Yakima, Washington

Salem Tile Factory

GOLD MEDAL
Highest award on Tile at Lewis and Clark Fair

Tile From 3 to 12 Inch

Order carload lots or for further particulars write for booklet or call on or address

J. E. MURPHY
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Underwood *and* Little White Salmon

Choice Fruit Land for Sale

I have a number of choice places for sale, improved and unimproved. Some with good heavy timber, ranging in price from $18.00 to $100.00 per acre. Some vacant land and relinquishments

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When you want any kind of Orchard Tools come to me and get the BEST

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Lath, Shingles, Wood, Etc.

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HOSE, NOZZLES
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PLUMBING SUPPLIES

C. F. SUMNER
Successor to NORTON & SMITH
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Okanogan Fruit Lands

Are a safe investment. We have land in tracts of from one to forty acres under the

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Also a number of good wheat, stock and dairy ranches for sale on easy terms
For particulars address

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Ideal Fruit & Nursery Co.

We have for fall and spring delivery a full line of absolutely true to name and free from all pests all the leading varieties of

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We invite inspection at any time
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Are prepared to furnish 3000 Horse Power, either Electric or Water, at Reasonable Rates

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WHITE RIVER FLOUR

MAKES

WHITER, LIGHTER BREAD

Winter Apples Grow

TO PERFECTION IN THE

Spokane Valley

UNDER OUR BIG RIVER CANAL

APPLE ORCHARD

OUR CANAL

You can pay for your land and support your family while the trees are growing. We have the markets. Ask for information. Just opening a new tract. Easy terms. A sure winner

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EASILY DETACHED
ALWAYS READY FOR ANY
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THE "New-Way" POWER SPRAYER

IS EQUIPPED WITH THE FAMOUS

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GASOLINE
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ALCOHOL
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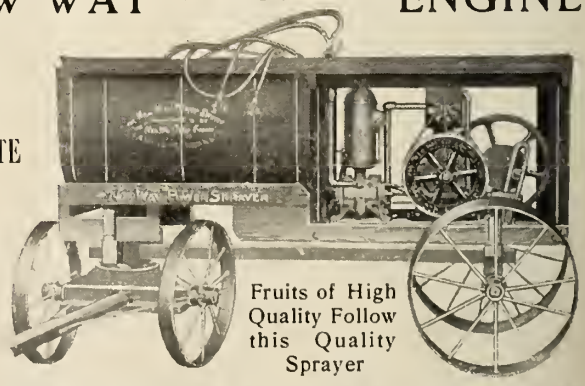

Fruits of High Quality Follow this Quality Sprayer

Carries high pressure without the usual vibration and strain, and is the most practical, durable and economical machine ever built for spraying. Use your own running gear if you prefer. Write us today for Spray Catalogue No. S-8

JOHN DEERE PLOW CO.
PORTLAND, OREGON

SUNNYSLOPE

THE GARDEN SPOT OF THE GREAT INLAND EMPIRE

Why pay $400 to $500 an acre when we will sell you choice fruit land for one-fourth the price on six annual payments

The finest apple, pear, berry, vegetable and high class farming land under the most complete irrigation system in the Northwest. Our Sunnyslope tracts are located only two miles from Baker City the Metropolis of Eastern Oregon and one of the coming great cities of the Pacific Coast. Present prices are far below actual values. Our policy is to make periodical advances. Write for descriptive literature. All inquiries fully and cheerfully answered

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BAKER CITY, OREGON

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Irrigated Fruit Lands

The best there is, is none to good, if you are going to grow an orchard. We have just platted a section of the choicest lands under our canal. This opportunity will not last long. See them

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Have for the coming season a very complete line of

NURSERY STOCK

Newtown & Spitzenberg propagated from selected bearing trees. Make no mistake but start your orchard right. Plant generation trees. Hood River (Clark Seedling) strawberry plants in quantities to suit.

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Apple Grafts

Piece and Whole Root

Fruit Tree Stocks

Including

Apple, Cherry, Plum, Pear
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Large General Nursery Stock

Pleased to Quote Prices

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ALL KINDS OF GARDEN AND FLOWER SEEDS BEST FOR YOUR USE, BY MAIL, POSTPAID

SEND TODAY FOR FREE CATALOGUE. IT TELLS YOU HOW TO GROW CAULIFLOWER, CELERY, TOMATOES AND CORN IN THIS CLIMATE

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PUGET SOUND SEED GARDENS
LACONNER, SKAGIT COUNTY, WASHINGTON

HELM APPLE ORCHARD

We make a special feature of apple and pear land

Southern Oregon Investment Co.

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Our Newtown Pippins are fine quality, keep better, and bring the highest price. Pear orchard net yield $500 per acre. Land finely located $30 per acre and upward.

GORE PEAR ORCHARD

Cupid Flour

Has same standing in the Flour Trade that Hood River Apples have in the Fruit Trade. *Made by*

HOOD RIVER MILLING CO.

Money for You

If you buy land in Umatilla County, Oregon. I have a large list of wheat, alfalfa and fruit ranches for sale that are money makers. Write for literature

A. O. JOHNSON
FREEWATER, OREGON

Okanogan NURSERIES

We have not another fruit tree to sell this season. We have however, a fine line of roses, shrubs, shade trees, berries and grapes

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OKANOGAN COUNTY

GRASSELLI'S ARSENATE OF LEAD

For the Destruction of the Codling Moth and All Leaf-Eating Insects, Use Grasselli's Arsenate of Lead

CODLING MOTH

¶ Grasselli's Arsenate of Lead is manufactured only by The Grasselli Chemical Company, established 1839, General Offices, Cleveland, Ohio. ¶ When applied, ordinary rains will not wash it off. It is not injurious if applied unskillfully or in too great quantities. ¶ Grasselli's Arsenate of Lead can be used successfully against all leaf-eating insects, including the Codling Moth, Canker Worm, Elm Leaf Beetle, Potato Bug, Gypsy and Brown-tail Moth, etc. ¶ **Grasselli's Bordeaux Mixture**—a preventive of all fungous diseases. ¶ **Grasselli's Bordeaux-Lead Arsenate Mixture**—an insecticide and fungicide combined in one effective article. ¶ Write for descriptive booklet, giving information how and when to spray.

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Main Office, CLEVELAND, OHIO

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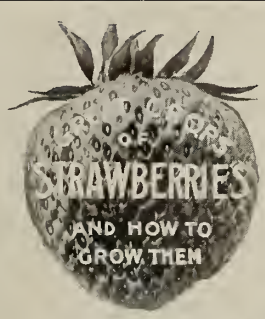
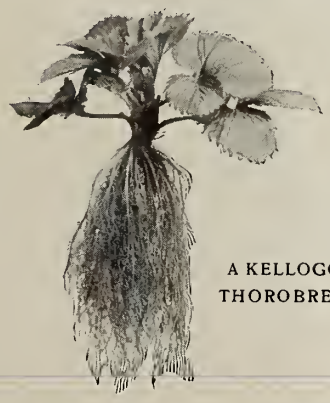


Send for Free Copy of

"Great Crops of Strawberries and How to Grow Them"

If you want to know how to grow big crops of big red strawberries and how to get big prices, send for our 1908 book. Don't think of getting along another season until you have it. It tells all about soil preparation, setting, mating, pruning, cultivating, spraying, mulching, picking, packing and marketing. All of these essential features and many more are explained in such a way that you can't go wrong. It was written right out in the strawberry field by a man who has made a fortune growing strawberries, and he tells you just exactly how he does things. Beautifully illustrated, mighty interesting. You may wonder how we can afford to send you this valuable book free. Well, you see, it's just like this:

WE HAVE THE LARGEST STRAWBERRY PLANT FARM IN THE WORLD



A KELLOGG THOROBRED

Note the Full Crown and Well Developed Root System

And our THOROUGHBRED PEDIGREE PLANTS have won the world's highest fruiting record. They have lifted many a man out of failure and boosted him to triumphant success. Perhaps you are one of these fellows who has an ambition to be the Strawberry King of your section. If you have, and you ever read this book, it will open your eyes. You will then see how easy it is to make money in the strawberry business when you have the right kind of plants and follow the proper methods.

It is a pleasure to grow strawberries when you can get bigger crops, bigger berries, and bigger prices than the other fellow. This book shows you just how to do this very thing. It is crowded brim full of good things from beginning to end. Every page has a picture of a strawberry or of a strawberry field, showing actual results obtained by growers who use THOROUGHBRED PEDIGREE PLANTS. These fellows are just bubbling over with enthusiasm, and that's what helps a man over the rough places. They say this book is worth its weight in gold. We say it is worth more—it's a regular gold mine to those who follow its instruction. Send and get one and see for yourself; your address—that's all. The Book's free.

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R. M. KELLOGG & CO. BOX NO. 355, THREE RIVERS, MICH.

Spraying for Profit

Farmers! Fruit Growers! Spray your plants, trees and vines.

Deming Spray Outfits are saving fortunes every year which would otherwise be lost through the ravages of the Codling Moth, Leaf-curl, Blight and other fungous diseases and insect pests. If you have one tree or thousands—if you are a vineyardist, a farmer, a poultryman—there is a Deming Sprayer specially designed for your need.—Every

DEMING
Spray Outfit

of the twenty different patterns and styles, from the simple hand pump used in a bucket to the power machine (see cut) for the big orchardist, are all substantially built with brass barrels, plungers and valves to resist corrosion.

Smaller sizes just the thing for washing wagons and windows; disinfecting and whitewashing hennerys, etc. Don't think of buying a sprayer until you write for our free catalog describing complete line. Address

THE DEMING COMPANY, 630 Depot St., Salem, Ohio.

NIAGARA LIME AND SULPHUR SOLUTION

Made under direction of the

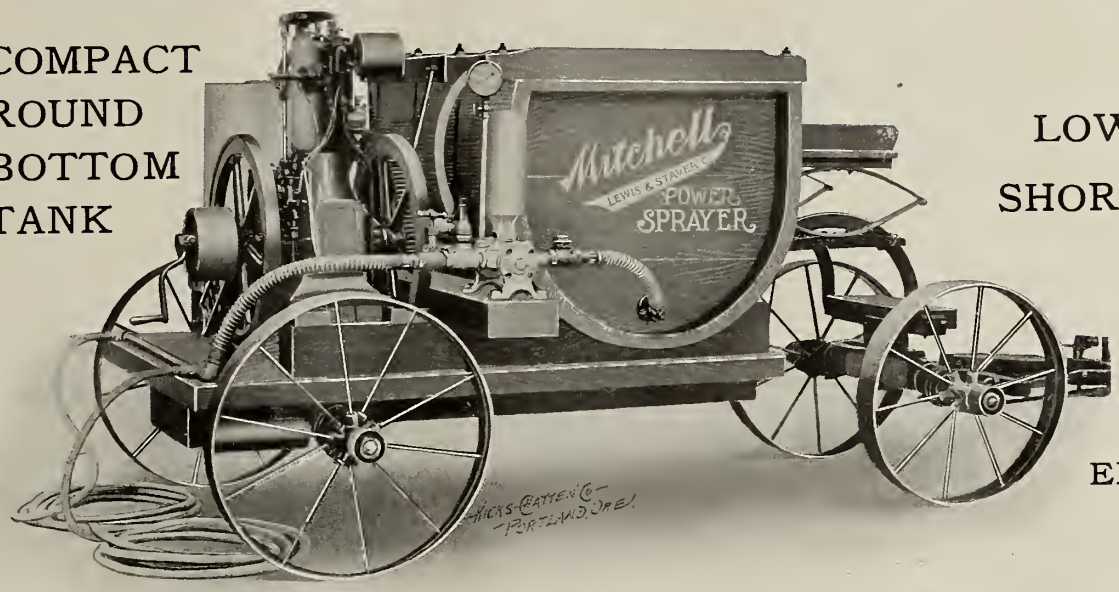
OREGON SPRAY & GAS CO.

PORTLAND, OREGON ORIGINATORS

This spray is receiving the hearty endorsement of the leading fruit growers of the Pacific Coast. It is helping to make better fruit; the kind that commands the highest price. Our Niagara Lime and Sulphur Solution will be made at Hood River, North Yakima, Albany and Medford. It will be sold at a reasonable price, and barrels can be returned for refilling. *We make no exaggerated nor misleading statements as to what "Niagara" will do. It is a highly concentrated lime and sulphur solution, nothing more, nothing less*

Gasoline Power Sprayer

COMPACT
ROUND
BOTTOM
TANK



LOW DOWN
SHORT TURN

SIMPLE
AND
EFFICIENT

PERFECT AGITATION

As light in weight as can be made and do the business.

Made up with a simple Stover two-horse power engine.

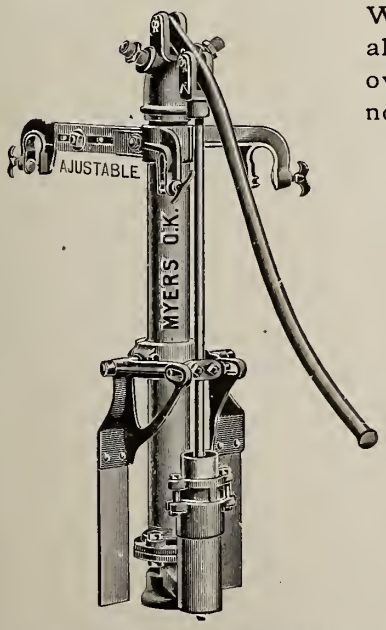
Low cooling tank (water can not slop over) and circulating pump.

No. 313 Myers New Low Down Horizontal Ball Valve Power Sprayer, cylinder two by five inch stroke, hemp packed plunger. Not affected by spray materials.

Safety relief valve, can be set at any pressure.

This outfit has been made up to meet the demands of fruit growers for a low down, short turn, compact and efficient outfit.

Equipped for four leads of hose. Price on application.



MYERS O. K. BARREL SPRAY PUMP WITH AGITATOR
"ONE OF THE FINEST"

We can also furnish you with the engine and pump of this outfit all connected together on one base, so you can place it on your own truck or wagon and use your present tank or barrels. Hose, nozzles, bamboo and aluminum rods are quoted extra.

SEND FOR SPRAY PUMP CATALOGUE

SHOWS ALL KINDS AND STYLES

Mitchell
LEWIS & STAYER CO

FIRST AND TAYLOR STREETS

PORTLAND, OREGON

BRANCHES:

SPOKANE, WASHINGTON

BOISE, IDAHO

A NEW, LOW DOWN, HORIZONTAL SPRAYER, COG GEAR LEVER, EASY AND POWERFUL. 2x5 CYLINDER

Some News About Magics

Department of Agriculture.

DIVISION OF BIOLOGY, HORTICULTURE, AND PUBLICATIONS,
H.M. CUSTOMS BUILDING,
Wellington, August 5th, 1907.

Mr. D. C. Crummey,
President, Bee Spray Pump Co.,
171 West Santa Clara Street,
San Jose, CALIFORNIA.

Dear Sir,

Your letter of the 11th June to hand. The pump you mention came to hand in very good order, and I much regret that it was not previously acknowledged, but owing to continued absence on my part, and illnesses of many members of my staff, some matters have been overlooked.

The pump was exhibited in this Department's Court at the Christchurch Exhibition and excited a great deal of interest. The attached account of an official trial that was held during the course of the Exhibition, will probably prove of interest to you.

Thanking you very much for your kindness,

I remain,

Yours truly,

T. W. Kirk

BIOLOGIST.

The report of the Judges awarding first prize and gold medal to the Bean Magic Pump reads as follows:--

"The spray produced by this pump was fully as efficient and lasted quite as long without pumping as the Bean Torrent + but the labor required in operating was more than one-third less than in any other pump. This is due to the improved spring attachment and other improvements."

(Sgd.) Geo. Quinn,
Chief Horticultural Instructor
South Australia.

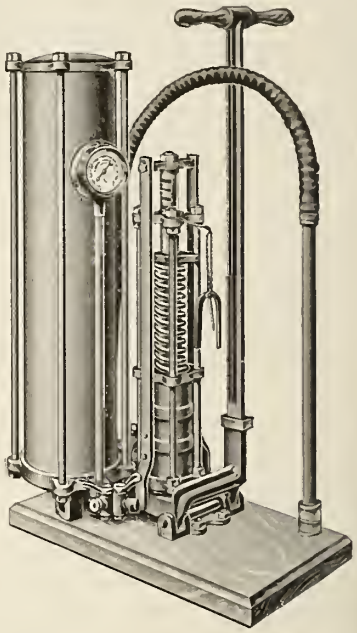
(Sgd.) T. W. Kirk,
Chief Division Biology and Horticulture, Agricultural Dept., New Zealand.

+ Our Bean Torrent Pump took second prize. One made in Ohio, third prize.

Our Catalogue No. 20 says: "These Magic Pumps run a third easier than any other spray pumps on the market, supplying the same nozzles at the same pressure," and now

Two New Zealand and South Australia Government Officials Say: "Magic Pumps Require More Than One-Third Less Labor"

We print a photographic copy of their letter and we have the Gold Medal and the Diploma awarded our Magic Pumps at their International Exposition in competition with nearly every pump manufactured



Think of what a third of your labor bill amounts to and a third higher pressure. All this in a simple pump which should be in every orchard. Write and ask us where you can see one of these pumps and we will also send catalogue and price delivered. Magic Pumps made in two sizes

BEAN SPRAY PUMP CO.

165 West Santa Clara Street SAN JOSE, CALIFORNIA

SUNSET LAND AGENCY

Dealers in Improved and Unimproved Irrigated Fruit Lands in the Vale of Cashmere

This valley is located in the heart of Wenatchee Valley midway between the Cascade Mountains and the Columbia River. The soil is unsurpassed for fertility. The climate is ideal and the scenery is on the grandest scale. The big red apple, which made this valley famous, grows to perfection here. For further information write

A. H. MOHLER, MANAGER, CASHMERE, WASHINGTON

THE DALLES, OREGON

ANNUAL OUTPUT

Choice Apples, Plums, Peaches, Apricots and Strawberries shipped in car lots.
40 cars Melons.
40 cars Prunes.
10,000 cases Cherries.
40,000 Cherry Trees planted during the last two years.
Two canneries in operation.
450,000 barrels Flour.
3,000,000 pounds of Wool scoured.
30,000 cases salmon.

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